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ABSTRACT

Presents an analysis of legislative policy actions and coordinating board mandates related to articulation and transfer in the state of Texas. Policy analysis techniques enabled an examination of the reasons the Texas Legislature and the Texas Higher Education Coordinating Board created policy actions concerning articulation and transfer, the resulting policy actions, and the outcomes of those policy actions. This study identified several reasons for changing the articulation and transfer policy in Texas, including: increased student mobility, difficulties faced by community college students when transferring credit, lost transfer credit, increased number of transfer students, elimination of duplicate courses in order to realize financial savings, and time to degree. Two main avenues utilized by the state of Texas to standardize credit transfer are a fully transferable core curriculum and field of study curriculum. Following an analysis of reasons behind Texas' current transfer and articulation policy and the policy itself, the outcomes of the policy analysis demonstrate that students are transferring at a higher rate and that the number of students transferring has also increased. (Contains 184 references.) (RC)

ARTICULATION AND TRANSFER:
THE TEXAS PERSPECTIVE

by

WALTON BOYD BUSH, JR.

A Dissertation in Higher Education

Submitted to the Graduate Faculty

of Texas Tech University in

Partial Fulfillment of the Requirements for

the Degree of

DOCTOR OF EDUCATION

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ABSTRACT

The purpose of this investigation was to conduct an analysis of legislative policy actions and coordinating board mandates related to articulation and transfer in the state of Texas. Policy analysis techniques enabled an examination of the reasons the Texas Legislature and the Texas Higher Education Coordinating Board created policy actions concerning articulation and transfer, the resulting policy actions, and the outcomes of those policy actions.

Articulation and transfer have become important across the United States with each state focusing on these issues in ways suitable to the individual state, and Texas is no exception. This study identified several reasons for changing the articulation and transfer policy in Texas. The reasons included: increased student mobility, difficulties faced by community college students when transferring credit, lost transfer credit, increased numbers of transfer students, elimination of duplicate courses in order to realize financial savings, and time to degree.

The Legislature of Texas created several policies to address these articulation and transfer needs. The two main avenues utilized by the state to standardize credit transfer are a fully transferable core curriculum and field of study curriculum. Furthermore, if the entire core or field of study curriculum is not completed, all successfully completed courses within the core or field of study curriculum are transferable; however, the student may still be required to fulfill any remaining requirements in the core or field of study at the receiving institution.

Following an analysis of reasons behind Texas' current transfer and articulation policy and the policy itself, the outcomes of the policy analysis demonstrate that students are transferring at a higher rate and that the number of students transferring has also increased. As the majority of the state's current articulation and transfer policies have been around since 1997, the Coordinating Board is still in the process of compiling the data to report policy outcomes.

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CHAPTER I

INTRODUCTION

Throughout the history of higher education, different forms of coordination and governance have shaped educational institutions. Whether the institution is Harvard or a local community college, the type of governance is the result of an institution's reliance on established practice, which is based predominantly on the policies of a statewide higher education system and of each institution. In Texas, the Texas Legislature and the Texas Higher Education Coordinating Board primarily shape higher education policy. This dissertation looks at the role of the Texas Legislature and the Texas Higher Education Coordinating Board's efforts in shaping articulation and transfer policy in the state of Texas. Before an analysis of these policies can take place, an understanding of the term policy must be developed.

To achieve accuracy, a definition of policy would likely mirror a full range of ordinary uses of the word. However, the breadth of possible applications for the term policy renders a specific definition useless. In fact, as Green states,

Such a definition would have to capture the likenesses and differences between managerial decisions, guides to practice, and rules of thumb as well as rules of conduct embodied in legislation. It would have to capture the difference between basic and procedural policy, between prescriptive and permissive policies and policies simply expressing the bare application of standard requirements in administration. (1994, p. 1)

Thus, a more generic definition of policy is required to communicate its use in higher education. Munger (2000) relies on Webster's Dictionary (1993) for a suitable definition and defines policy as "prudence or wisdom in the management of affairs; a definite

course or method of action selected from among alternatives and in light of given conditions guide and determine present and future decisions" (p. 9).

Clearly, policy is the backbone of the changing higher educational system. Recently, legislative involvement in policies related to higher education has impacted the management and administration of postsecondary institutions. Clark Kerr (1991) described this legislative impact in the 1980s by recognizing the decade as

The Decade of the States, ... a decade when policy leadership would be dominated by governors, and when higher education could expect far more aggressive efforts aimed at connecting it to the states' social and economic agendas. (p. 7)

Government-initiated reform has in the past and continues today to contribute to an increase in the states' role in higher education policy.

Once policy is identified, why is it important to examine policy? Contrary to the best-laid plans of federal, state, and local policy makers, policies are not always implemented as originally conceived and the resulting outcomes are not always as intended. As Gam (1992) noted, "simply because legislators express explicit intentions in policy does not guarantee those aims will be preserved through the implementation process. Frequently, implementers misconstrue or disagree with the conceived purpose and undermine legislative intent" (p. 2). One way to determine whether the intent of the policy was followed and whether the policy is effective is through policy analysis. Policy analysis "can provide an objective basis for assessing the match or mismatch of current policies with the ends that state leaders seek" (McGuinness, 1994, p. 20). Basically, policy analysis examines the reason for the policies, the policy actions taken, and the

resulting policy outcomes. Consequently, policy analysis will be used to examine legislative and coordinating board policies related to articulation and transfer.

Gill and Saunders (1992) outlined three major stages of policy analysis. In stage one, the policy analyst conducts a mini-analysis to examine the reasons for the policy action. In determining the reasons for a policy, the analyst creates a set of objectives to guide the analysis of an identified problem. As new information is discovered, the analyst modifies these objectives to accommodate the new findings. In addition, the analyst develops a comprehensive understanding of the environment and culture affected by the policy, and then establishes assumptions to guide the analysis. In stage two, the researcher unravels the policy analysis knot by uncovering the policy actions implemented to correct the problem discovered during stage one of the process. During this second stage, the analyst examines four basic components: the policy issue, the environment, the factors affecting implementation, and the proposed alternatives or recommendations. In the final stage, the analyst examines the outcomes of policy actions to determine if the implementation activities were followed and the degree to which the intended outcome was achieved. This process of examining the outcomes of the policy action can help the analyst determine if the policy accomplished its intended purpose or if new policies should be developed. Therefore, this study will analyze articulation and transfer policies in Texas by examining the reasons for the policies, the policy actions taken, and the resulting policy outcomes.

Policy Analysis

A multitude of topics have been examined through policy analysis techniques. For instance, policy analysis has been conducted on economic issues ranging from competition, regulation, and convergence to economic policies initiated during a financial crises (Chin, 1998; Feaver, Morris, & Cole, 1998; Fryxell, Sirbu, & Wanickhkorn, 1999; Griffin, 1995; Heckman, 2000; Hennessy, 1998; Kann & Weyant, 2000; Lindsey, 1999; Luger, 1997; Mikesell, 2000; Sarkar & McKillop, 1994; Tomich, Kuusipalo, Menz, & Byron, 1996). Furthermore, in the area of education, policy analysis techniques have been applied to such issues as national and international education issues and policies (Crawford, 1999; Hanson, 1999; Gitlow, 1999; Guston, 1997; McGuire & Casey, 1999; Placier, Hall, Mckendeall, Benson, & Cockrell, 2000; Wielemans, 2000; Zumeta, 1992). Finally, policies related to the environment, such as environmentalism and forestry emissions have also been subject to substantial analysis (Babu, 2000; Baron, Schechter, & Amir, 1994; McBeth & Clemons, 1999; Schaible, 1997; Schnute, Cass, & Richards, 2000; Tarp, Gonzalo, & Fin, 1997; Togerson, 1998; Waddell, 2000). The breadth of application for policy analysis confirms its legitimacy as an effective tool in the process of tracking and examining change.

To further demonstrate the broad use of policy analysis, policy analysis has examined international issues as well. For example, policy narratives outlining urban problems discovered in immigration into Britain and Israel have been studied using policy analysis techniques (Atkinson, 2000; Critcher & Gladstone, 1999; Feaver, Morris, & Cole, 1998; Geva-May, 2000; Lindsey, 1999; Morgan, Kandlikar, Risbey, &

Dowlatabadi, 1999; Piazzolo, 1998; Sakar & McKillop, 1994; Smith, 1999; Smith, 2000; White, 1999; Weinberg, 1998; Wielemans, 2000). Thus, the impact of policy analysis and its usefulness can be seen in its application not only to national topics, but international topics as well.

With the emergence of technology in modern society, the necessity for effective policy to govern informational technology and communication has moved to the forefront. Accordingly, policy analysis has been used to examine two broad technological areas, local access networks and other Internet issues. Additionally, minor issues, such as communication policies at small information firms, have not escaped the scrutiny of policy analysts (Fryxell, Sirbu, & Wanickhkorn, 1999; Fuller & Southern, 2000; Hennessy, 1998).

To further illustrate the expanse of applications for policy analysis, areas such as the law and medicine should be examined. Legal issues such as copyright and fair use as well as court rulings on individuals with disabilities have utilized policy analysis (Gitlow, 1999; Jackson, 1992; Luger, 1997; Rupp-Serrano, 1997). Furthermore, policy analysis has scrutinized medical issues such as fertility care, nursing procedures, and healthcare reform (Cheek & Gibson, 1997; Freedman, 1996; Lush, Cleland, Lee, & Walt, 2000; Maslin-Protherro & Masterson, 1998). Certainly, politicians have received a great deal of information from policy analysts. Additionally, issues such as urban development, governmental disclosure, and federal social policy have been examined to aid governmental officials in decision making activities (Atkinson, 2000; Crawford, 1999; Danziger, 1995; Hammond & Knott, 1999; Harrington, 1996; Hill, 1998; Geva-May &

Kfir, 2000; Gitlow, 1999; Lidstrom, 1998; Howlett & Ramesh, 1998; Lush, Cleland, Lee, & Walt, 2000; Rao, 1999; Rochefort, Rosenberg, & White, 1998; Williams, 1999). In fact, the National Center for Policy Analysis, a nonprofit public policy research institute, is currently conducting policy analysis research in 21 different areas, including higher education. These numerous examples of the effectiveness of policy analysis establish its use as a developmental tool for a state's system of higher education.

Higher Education Policy Analysis

One current focus of policy analysis in higher education is in the area of articulation agreements designed to accommodate the transfer of credit from one institution to another. Articulation is "the systematic efforts, processes, or services intended to ensure educational continuity and to facilitate orderly, unobstructed progress between levels or segments of institutions on a statewide, regional, or institution-to-institution basis" (Bender, 1990, p. 3). Regrettably, the voluntary efforts of higher education officials to implement articulation agreements have not met lawmakers' expectations. Bender (1990) found that in 1989 thirteen states had considered or passed legislation concerning transfer or articulation requiring institutions to address these issues. In fact, legislative action has been cited in numerous studies as the key reason for advances in articulation mandated from the state (Arizona Board of Regents, 1998; Banks, 1992; Cepeda, 1991, 1994; Coleman, 1991; Florida State Department of Education, 1988, 1994; Harden, 1991; Hughes, 1997; Illinois Community College Board, 1989; Illinois State Board of Higher Education, 1994, 1996a, 1996b, 1997; Indiana State

Commission for Higher Education, 1996; LeMon & Pitter, 1996; Lynch, 1994; Montana Higher Education Commission, 1991; Moore, 1997; Nebraska Coordinating Commission for Postsecondary Education, 1993; Nussbaum, 1997; Oregon State System of Higher Education, 1998; Rhode Island State Board of Governors for Higher Education, 1999; Valencia, 1993; Virginia State Council of Higher Education, 1991; Williams, 1990). In the years since Bender's (1990) study, many states have worked to create articulation and transfer policies to smooth the transition from institution to institution. According to the Education Commission of the States (2001), 30 states have transfer and articulation legislation, 40 states have cooperative agreements, 33 states collect and report transfer data, 18 states provide incentives and rewards to transfer students, 26 states have articulation guides, 23 states have a common core, and 8 states have a common course numbering system in place. Moreover, since 1999, Connecticut, Texas, Tennessee, Maryland, and Washington have all enacted new or additional articulation and transfer policies. While studies have identified policy initiatives, information providing an in-depth policy analysis of the reasons for the policies, the policy actions taken, and the resulting policy outcomes as related to articulation and transfer is limited.

Despite the numerous studies that have investigated various articulation and transfer policies, a review of the literature from January 1988 to July 2001 using "articulation," "transfer credit," and "Texas" as major descriptors identified only three reports focusing specifically on statewide articulation and transfer policies in Texas (Coleman, 1991; Creech, 1997; Timmerman, 1995). Two of the studies (Coleman [1991] and Creech [1997]), detailed many factors contributing to the need for articulation on a

state-wide basis including: the rising cost of higher education; a decline in transfer rates; the low academic achievement among students who transfer; and the widespread interest in the educational mobility of minority students. Coleman (1991) found that state legislatures in Texas and Arkansas were working to maximize transfer effectiveness from two- to four-year institutions. Additionally, Coleman cites the passage of House Bill 2182 in 1982 as an example of efforts on the part of the Texas Legislature to set educational policy. House Bill 2182 led to the creation of the Texas Academic Skills Program (TASP) test, an entry program requiring individual assessment, placement, and remediation. In examining the transfer policies of 46 four-year institutions in Arkansas and Texas, Coleman found a wide variety of standards in university admissions practices. His study noted that credit is generally only accepted from accredited colleges and students are required to be in good standing to receive the transfer credit. Furthermore, the number of hours transferable range from 58-90 hours and the required grade point averages (GPA) varied according to the number of hours transferred. In addition, incoming students in Texas with less than 60 hours are required to meet minimum scores on the TASP test before being allowed to enroll in upper-level courses.

Also cited in Coleman's (1991) study was a survey conducted in early 1991 by Dale Campbell, Assistant Commissioner of the Texas Higher Education Coordinating Board (Coleman did not reference the exact date). Campbell's study indicated that many states outside of Texas are moving carefully toward a uniform transfer model. Campbell's national survey reported that eight states require transfer data to be reported to the respective legislature. In addition, 31 states have the capacity to assess student

transfer rates, but only five states are currently assessing these rates. Unfortunately, Coleman did not list the states reporting transfer rates and did not cite any other data from Campbell's study. The remainder of the Coleman study focused on data concerning East Arkansas Community College (EACC) and did not examine other information related to Texas. While the Coleman study was helpful in examining the reasons for the increased importance of transfer, minimal information was given about articulation in Texas. For instance, Coleman cited that a reason for the change in transfer policy in Texas was the low achievement among students who transfer between higher education institutions. To correct the low achievement, Coleman cited the passage of House Bill 2182 and the creation of the Texas Academic Skills Program (TASP). Unfortunately, information addressing whether these actions corrected the problem of low achievement among transfer students is not available. Similarly, Coleman's study did not analyze if requiring the student to achieve a minimum score on the TASP has been effective. In other words, in Coleman's study, a reason for articulation and transfer policy and subsequent corrective policy actions taken were identified, but the policy outcomes were not evaluated.

Besides the low achievement among transfer students, Coleman (1991) points out a variance in the GPA required of students seeking transfer. However, the study did not report the reason for the variance in the required GPA. Does the variance indicate that the more hours transferred translated into a higher probability of success, or is the variance simply an institutional issue? Unfortunately, the study does not correlate the reasons for the policy, policy actions taken, and the resulting policy outcomes.

Creech (1997) issued a report evaluating the college transfer policies of each of the 15 member states of the Southern Regional Education Board (SREB). Included in the study were Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. In examining SREB states, Creech found that enrollment at two-year colleges was increasing faster than at four-year colleges, the number of students transferring from four-year colleges to two-year colleges or other four-year schools is almost equal to those transferring from two-year to four-year colleges, and most students completing vocational programs are choosing to continue toward a four-year degree. In Texas, as Creech points out, the Legislature charged the Texas Higher Education Coordinating Board with the task of developing a comprehensive core curriculum of at least 42 hours guaranteed to be accepted by all public institutions. In addition, most of the public and private two-year colleges in Texas use a common-course numbering system lauded by Creech as the "definitive guide to recognizing the equivalence and transferability of lower-division academic courses at two-year colleges" (p. 7). Consequently, many universities across the nation publish tables linking their course numbers to the Texas common-course numbering system.

While Creech's (1997) report outlined a few reasons for articulation and transfer in Texas, the study touched on only two policy actions and no policy outcomes. The two policy actions were the comprehensive core curriculum of at least 42 hours and the common-course numbering system. While these actions were designed to ease transfer barriers, the study fails to point out details addressing the underlying policy, the rules

established by the Coordinating Board, the problems that lead to the policy initiatives, and the effectiveness of those policy actions. Although Creech lauds the states' common-course numbering system as the definitive course guide and he states that the system is utilized by many universities nationwide to link their own course numbers to the Texas system, he did not address the effectiveness of the 42-hour comprehensive core curriculum. Creech's study fails to utilize the three policy analysis steps by identifying the reasons for the policies, the policy action taken, and the resulting policy outcomes.

To facilitate the increasing number of transfer students throughout the country, Creech (1997) urges states to develop common standards for core curriculum requirements, especially between two-year and four-year institutions. Specific recommendations to states include: developing common general education requirements; awarding third-year status to students at four-year institutions who earn associate degrees; using computer technology to inform students of the process enabling acceptance of credits at any public college in the state; establishing statewide transfer committees to evaluate and develop policies; and using transfer coordinators to advise students on transfer possibilities. Once implemented, Creech believes these suggestions would increase the accessibility of higher education.

In addition to the studies which addressed a national or multi-state assessment of articulation, the Texas Higher Education Coordinating Board along with the Texas Association of Junior and Community College Instructional Administrators created the Transfer Success Work Group to develop a concept paper examining the transfer function in Texas public community and technical colleges. The primary purpose of the work

group was to determine if the transfer function in Texas public two-year institutions provided students increased pathways to success in their educational pursuits and to make recommendations regarding strategies and methods designed to improve student transfer (Timmer, 1995). The work group study is important to this dissertation in two ways. First, in 1987 and 1989, the Texas Legislature enacted new transfer legislation designed to ease the difficulties experienced by transfer students. The work group study specifically examined transfer in Texas from 1990 to 1994 and recorded the first effects of legislation designed to ease transfer burdens. In 1997, after the work group study was conducted, new legislation repealed the 1987 and 1989 laws thus creating new policies to increase student transfer in Texas. Comparing the findings of the work group report with current transfer rates can provide invaluable insight into the effectiveness of the 1997 transfer legislation. In addition, the outcomes identified in this study are the basis for the outcome categories established for research purposes in Chapter III of this dissertation.

In order to examine transfer in Texas, the work group study performed five tasks. In its first task, the work group reviewed literature that identified successful strategies and possible barriers to transfer effectiveness in public two-year institutions. The second task of the work group was to establish indicators to assess the effectiveness of the transfer function in Texas. Key indicators identified for this study were: the student transfer rate from Texas public two-year institutions to Texas public four-year institutions; the student transfer rate at different stages of academic progress in the community college; and the academic success and persistence rates of transfer students in four-year institutions. In its third task, the work group surveyed leaders of instruction

and student services at Texas two-year institutions to determine current practices and perceptions about transfer success. Task four directed the work group to develop and recommend guidelines for an ongoing transfer assessment process to improve the community college transfer function. Finally, the work group was charged with the task of recommending guidelines and processes for statewide assessment and improvement of the transfer function in Texas public two-year institutions.

The major findings of the work group study suggest that transfer effectiveness in Texas is similar to that in the rest of the nations higher education systems. For instance, depending on the definition of "transfer student," some 22-32% of students transferred from two-year institutions to four-year institutions. In addition, 85% of the students who transfer from a public two-year institution to a four-year institution in Texas enroll for a second semester at the senior institution. In fact, studies at selected two-year institutions found that students who persist and achieve higher stages of academic progress in the two-year institutions are progressively more likely to transfer and achieve academic progress in the senior institutions. While easing transfer troubles is desired by many in higher education, two-year institutions instructional and student support leaders report discrepancies between the factors that currently exist with those that should exist at the Texas two-year institutions to ensure successful student transfer.

The work group examined longitudinal student transfer data at several levels and established transfer rates for Texas community colleges using data readily available from the Texas Higher Education Coordinating Board. The work group only included students who had attempted at least 15 hours of college work and who had attended their initial

community college for at least two semesters. This restriction meant students who transferred to private or out-of-state senior institutions would not be counted. Consequently, the study examined only students who transferred to public senior institutions in the state of Texas.

To begin the study, the work group gathered data from the Integrated Post-secondary Educational Data System (IPEDS) defining the cohort as:

- Students enrolling summer 1990 as first-time college students who attended the same community college fall 1990;
- Students who enrolled fall 1990 as first-time in college students; and
- Students still enrolled during fiscal year 1994 (fall 1993 or spring 1994) at the community college would be reported separately. (Timmer, 1995, p. 4)

To determine the level of persistence for transfer students in four-year institutions, persistence rates were calculated for transfer students who enrolled for at least two semesters in the four-year institution (Timmer, 1995). In analyzing the data, the work group broke down the statewide data by student major alone and grouped the type of major with gender, ethnicity, and age group.

Table 1.1 examines the transfer of students by type of major: academic, technical, and undeclared. The table then lays out the number and percentages of students, who enrolled, were still enrolled, and who transferred to senior institutions.

Table 1.1
Transfer of Students by Type Major

Statewide Totals First-Time-In-College Freshman Summer/Fall 1990 Cohort through Spring 1994									
Type Major	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '94	% Enr in CTC FY '94	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
Academic	37,073	26,211	8,200	31.3	18,011	5,719	31.8	53.1	85.8
Technical	20,406	13,568	4,123	30.4	9,445	1,064	11.3	38.2	81.6
Undeclared	19,665	11,674	4,340	37.2	7,334	2,029	27.7	54.6	84.0
Total	77,144	51,453	16,663	32.4	34,790	8,812	25.3	49.5	84.9

Source: Texas Association of Junior and Community College Instructional Administrators

Tables 1.2-1.4 calculate only data for students with academic majors. Table 1.2 illustrates transfer rates for first-time-in-college students in summer/fall 1990 through spring 1994 by gender.

Table 1.2
Transfer of Students by Gender

Statewide Totals for Academic Students First-Time-In-College Freshman Summer/Fall 1990 Cohort through Spring 1994									
Gender	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '94	% Enr in CTC FY '94	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
Female	20,440	14,507	4,761	32.8	9,746	2,968	30.5	53.3	85.8
Male	16,633	11,704	3,439	29.4	8,265	2,751	33.3	52.9	85.8
TOTAL	37,073	26,211	8,200	31.0	18,011	5,719	31.8	53.1	85.8

Source: Texas Association of Junior and Community College Instructional Administrators

Table 1.3 contains the transfer rates for first-time-in-college students in summer/fall 1990 through spring 1994 by ethnicity.

Table 1.3
Transfer of Students by Type Ethnicity

Statewide Totals for Academic Students First-Time-In-College Freshman Summer/Fall 1990 Cohort through Spring 1994									
Ethnicity	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '94	% Enr in CTC FY '94	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
White	24,159	16,473	4,927	30.0	11,546	4,175	36.2	55.3	87.0
African- American	3,559	2,426	683	28.0	1,743	369	21.2	43.4	83.5
Hispanic	8,135	6,377	2,303	36.0	4,074	898	22.0	50.2	80.5
Asian- American	811	633	213	34.0	420	193	46.0	64.1	90.7
Native American	133	90	25	28.0	65	12	18.5	41.1	83.3
International	276	212	49	23.0	163	72	44.2	57.1	79.2
TOTAL	37,073	26,211	8,200	31.0	18,011	5,719	31.8	53.1	85.8

Source: Texas Association of Junior and Community College Instructional Administrators

Table 1.4 contains the transfer rates for first-time-in-college students in summer/fall 1990 through 1994 by age group.

Table 1.4
Transfer of Students by Age Group

Statewide Totals for Academic Students First-Time-In-College Freshman Summer/Fall 1990 Cohort through Spring 1994									
Age Group	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '94	% Enr in CTC FY '94	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
<17	195	106	39	36.8	67	43	64.2	77.4	83.7
17-19	23,201	18,354	5,768	31.4	12,586	4,855	38.6	57.9	86.7
20-24	5,599	3,417	1,076	31.5	2,341	456	19.5	44.8	80.7
25-29	2,748	1,522	502	33.0	1,020	152	14.9	43.0	78.9
30-39	3,463	1,936	565	29.2	1,371	163	11.9	37.6	83.4
40-49	1,390	692	200	28.9	492	45	9.1	35.4	77.8
50-59	354	140	40	28.6	100	4	4.0	31.4	75.0
60-69	102	39	8	20.5	31	1	3.2	23.1	100.0
70 & up	21	5	2	40.0	3	0	0.0	40.0	0.0
TOTAL	37,073	26,211	8,200	31.3	18,011	5,719	31.8	53.1	85.8

Source: Texas Association of Junior and Community College Instructional Administrators

The previous tables summarize the data accumulated in the work group study.

The study and its findings will be examined further in the following chapters of this dissertation.

Texas Policy

Before examining articulation and transfer policies in Texas, the functioning and organization of the Texas Legislature and the Texas Higher Education Coordinating Board as related to the setting of policy must first be understood. The Texas Legislature is the lawmaking body of the state and has the primary responsibility of enacting laws to provide for the health, welfare, education, environment, economic, and general well

being of the citizens of Texas (Texas Legislature Online, 2001). Through the passage of bills, resolutions, and proposed amendments to the state constitution, the Texas Legislature adopts public policy designed to direct the various agencies within the state. Similar to other states, Texas utilizes a bicameral system consisting of two separate chambers: a 31-member senate and a 150-member house of representatives. The senators and representatives are elected from single-member districts to serve four-year and two-year terms, respectively (Texas Legislature Online, 2001).

In accordance with the Texas Constitution, the Legislature meets in a regular legislative session in Austin every two years to consider new legislation. Among the variety of bills brought before both houses, higher education issues are first addressed in the House Committee on Higher Education or the Senate Committee on Education. For a bill to proceed, it must be voted out of committee in the originating chamber. While the bill is in committee, the effects of the bill are discussed and modified as necessary to receive committee approval. If the bill meets with the approval of the committee, it is then voted out of committee. If not, the bill dies. Once approved, the bill is then sent to the calendars committee where a date is set for a second reading of the bill in the originating chamber. During the second reading in the House or Senate, various floor amendments can be added to a bill and the members debate the merits of the legislation and proposed floor amendments. In most cases, the third reading of the bill takes place the following day and includes a final vote on the bill including any adopted amendments. Once a bill passes one chamber, it goes to engrossment. Engrossment is a term used to signify the final version of a bill passed by a chamber. The engrossed bill

then goes to the other chamber where the process is repeated. If the chambers pass different versions, the bill goes to a joint conference committee where a final version is agreed upon by a majority of the joint committee members. Both chambers then vote on the conference committee version, but cannot attach any further amendments to the bill. Once approved, the bill goes to the Governor to be either signed or vetoed.

Through the enactment of bills, the Legislature defines the state's policies and goals for higher education, appropriates the necessary funds to achieve those goals, and develops accountability measures for the higher education system. While the Legislature sets broad policy, the implementation of the policy is generally delegated to the appropriate agencies and officials.

To oversee higher education in Texas, the Texas Legislature established the Texas Higher Education Coordinating Board (Coordinating Board). In 1965, the Coordinating Board was created by the Texas Legislature to "provide leadership and coordination for the Texas higher education system to achieve excellence for the college education of Texas students" (THECB, 2000). The statutory language creating the Coordinating Board states "the board shall represent the highest authority in the state in matters of public higher education and is charged with the duty to take an active part in promoting quality education in the various regions of the state" (Texas Education Code, 2000). Accordingly, the Coordinating Board serves as an advocate for higher education, providing advice and comprehensive planning capability to the Legislature, coordinates the effective delivery of services, and administers assigned statewide programs (THECB, 2000). There are four activities the Coordinating Board is charged with: review and

recommend changes in the formulas that allocate state funds to public institutions; authorize quality academic programs; eliminate costly duplication in academic programs, unnecessary construction projects, and real estate acquisitions; and develop plans to guarantee the future quality of Texas public higher education (THECB, 2000). As the population of the state and its higher education system increases, the responsibilities of the Coordinating Board grow correspondingly with major new responsibilities being added during each legislative session. Chapter 61 of the Texas Education Code establishes the Coordinating Board's statutory authority. While the Board's duties are too vast to detail here, the following illustrates the scope of the Coordinating Board's assignments:

- Provide leadership and coordination for the Texas higher education system to achieve excellence for the college education of Texas students through the efficient and effective utilization and concentration of available resources and the elimination of costly duplication in program offerings, faculties and physical plants [Sec. 61.002(a)].
- Assure that the entire system of education supported with public funds is coordinated to provide the citizens with efficient, effective, and high quality educational services and activities. Ensure that the long-range plans and educational programs established by the Coordinating Board and the State Board of Education complement the functioning of the entire system of public education, extending from early childhood education through postgraduate study. (THECB, 2000)

In 1999, the 76th Legislature assigned the following additional responsibilities to the Coordinating Board:

- Implement and administer the Toward EXcellence, Access, & Success (TEXAS) grant program which provides grants to Texas college and university students who graduate from a public or accredited private Texas high school, after completing the recommended or advanced high school curriculum or its equivalent, and who demonstrate financial need [Sec. 56.301, et seq]

- Implement and administer the Teach for Texas Conditional Grant Program to provide a conditional grant to junior or senior university students pursuing baccalaureate degrees who agree to enter a teaching field in a critical shortage area or field [Sec. 56.309].
- Administer the Center for Financial Aid Information to provide information on financial aid and higher education to middle and high school students and their parents as well as counselors [Sec. 61.0776].
- Develop and annually update a uniform strategy to identify, attract, retain, and enroll students that reflect the population of the state. Institutions are required to implement the strategy and report annually to the Coordinating Board [Sec. 61.086].
- Administer the grant programs established from the proceeds of the Permanent Fund for Higher Education Nursing, Allied Health, and Other Health-Related Programs and the Permanent Fund for Minority Health Research and Education [Secs. 63.202 and 63.303]. (THECB, 2000)

Thus, the Coordinating Board's responsibility for the higher education system in Texas is extensive.

The Coordinating Board is comprised of 18 members appointed to overlapping six-year terms by the governor and confirmed by the Texas Senate. The Board meets quarterly in Austin. Board members appoint a commissioner of higher education to serve as the chief administrator for the agency, which has approximately 276 full-time employees (THECB, 2000).

Along with the previous responsibilities, one of the more prominent roles of the Coordinating Board is the development of policy through the adoption of rules. According to the Texas Administrative Code (2000) the Coordinating Board adopts rules through committees. Each committee is appointed from either the membership of the Board or from outside the membership, if the chair determines outside people are

necessary. Following discussions, the committee recommends rules to the Coordinating Board and then the Coordinating Board as a whole votes on the recommended rules. If approved, the Coordinating Board must give at least 30 days notice of its intention to adopt a rule before the rule can be officially adopted. Furthermore, the Coordinating Board must file notice of the proposed new rule with the secretary of state for publication in the Texas Register. In addition, the Coordinating Board must provide to the Lieutenant Governor and the Speaker of the House of Representatives a copy of the notice filed with the secretary of state. Before adopting a rule, a state agency must give all interested persons a reasonable opportunity to submit data, views, or arguments, orally or in writing, and the Board is required to fully consider all written and oral submissions concerning a proposed rule. At the end of the 30-day waiting period, each chamber of the Legislature refers each proposed state agency rule to the appropriate standing committee for review before the rule can be adopted. Then the standing committee, on majority vote of its members, may send to the Coordinating Board a statement supporting or opposing adoption of a proposed rule. If approved, the rule takes effect 20 days after the date on which it is filed in the office of the secretary of state.

Ultimately, the Coordinating Board exercises its authority by adopting rules addressing higher education issues. By including the rules adopted by the Board in the Texas Administrative Code, the Coordinating Board provides higher education institutions with details of the requirements under state law. Thus the Texas Legislature and the Texas Higher Education Coordinating Board develop and implement policies related to articulation and transfer in Texas.

Statement of Problem

A plethora of studies have investigated articulation and transfer issues, but few have focused on the efforts in the state of Texas. While these studies provide valuable information, none of the studies include a policy analysis of transfer and articulation in this state. The Coleman (1991) and Creech (1997) studies identified parts of two components of policy analysis, reasons and policy actions, but failed to make a detailed examination of the reasons that lead to transfer and articulation, the resulting policy actions, and the outcomes of the policy actions. These studies are helpful, but as previously pointed out they are not comprehensive in nature. In other words, researchers did not examine the reasons for the policies, the policy actions taken, and the resulting policy outcomes in Texas.

Purpose

The purpose of this investigation was to conduct a policy analysis of legislative policy actions and Coordinating Board mandates related to articulation and transfer in the state of Texas. Policy analysis techniques enabled an investigation into the reasons the Legislature and the Texas Higher Education Coordinating Board created policy actions concerning articulation and transfer, the policy actions taken as a result of the reasons identified, and the outcomes of those policy actions. Case study methodology was used to focus this investigation on the state of Texas.

Questions Guiding the Study

Three questions guided this investigation. In order to discover the events that have transpired in Texas, the first research question determined the state's current articulation and transfer policy. The second question retrospectively determined the factors that led the state of Texas to create policy addressing articulation and credit transfer between public institutions of higher learning, specifically related to the transfer between two-year and four-year institutions. Finally, the third research question investigated whether the outcomes of the policy actions were measured and detailed the results of any such measurement. These questions were developed into research questions as presented in the methodology chapter of this dissertation.

Need for the Study

Lawmakers and researchers have examined articulation and transfer policies within certain states. A number of states have implemented articulation and transfer policies for a variety of reasons. Moore (1997) points out that in California, the changing demographics of the state compelled lawmakers to create specific legislation addressing articulation and transfer. In Florida (LeMon & Pitter, 1996), a policy analysis revealed a primary factor in transfer difficulties was that the limited number of students allowed in certain programs produced competition for places in these degree programs at its universities. Transfer students and current university students were both seeking a limited number of available program places thus creating an access problem for the transfer students. Texas faces some of these same problems and, accordingly, requires

study of the articulation and transfer policies in this state. To build the case for the need for articulation and transfer policy in Texas, several issues will be stacked like building blocks, one on top of the other, to describe a combination of concerns that separately would not have an impact on higher education. However, taken together, these concerns show the growing need for articulation and transfer actions in Texas.

First, population changes have led to rapid growth and increased costs in the delivery of governmental services, especially education. For instance, California experienced a rapid increase in population and student demand for higher education. As a result, laws were enacted to ensure the development of articulation and transfer programs between universities, colleges and community colleges (Cepeda, 1994). Like California, Texas faces the dilemma of providing education to a growing number of students from a variety of backgrounds. According to the lowest projected growth rate in a study conducted by the Texas Legislative Council (1996), the population of Texas will reach 33.8 million by 2030, an increase of more than 99% from the population in 1990. Assuming the highest rate of growth identified in this study, the population of Texas could be nearly 38.7 million by 2030, an increase of nearly 128% from the 1990 population. In the past decade alone, Texas grew 22.8% and became the second most populous state in the nation with an estimated population of 20.8 million people (Census, 2000).

As the population of the state grows, the number of high school graduates will increase as well. In 1995, the number of Texas high school graduates was 169,085. By 1999, the number of high school graduates increased to 203,393 (TEA, 2000). This

growth in the number of students graduating from Texas public schools is not projected to slow down. In fact, the number of high school graduates in Texas is projected to increase to 233,458 by 2010 (The Chronicle of Higher Education, 2000).

Correspondingly, as the number of high school graduates increases, the number of students attending college is also projected to increase.

In 1991, the Texas Higher Education Coordinating Board reported a total enrollment in public and private higher education institutions in Texas of 899,324. However, by 1998, the number of students had increased to 939,364, an increase of 40,040 students. Furthermore, the number of first-time, full-time freshman increased from 81,700 in 1995 to 90,085 in 1998. With a growing population, an increase in the number of high school graduates and more students attending college, Texas higher education must examine the way it plans to handle the influx of students to its higher education institutions.

In addition to the escalating costs and increased population, more students are starting higher education careers at two-year institutions. In Florida, a 2+2 system was designed to channel students through community colleges for the first two years of post-secondary education and to allow the students to complete undergraduate degrees at four-year institutions. This 2+2 system was created to "widen geographic access to postsecondary education; first to lower division programs, then to baccalaureate education" (Florida State Department of Education, 1998, p. 22). According to data released by the Texas Higher Education Coordinating Board (2000), Texas faces the same challenge as Florida. The latest figures available from the Coordinating Board

demonstrate that during the 1998 academic school year, the number of first-time, full-time, freshmen, at Texas public community and technical colleges was 46,940 compared to only 43,145 at Texas public universities. In addition, in 1998, Texas public community and technical colleges boasted a total headcount of 421,408 compared to only 398,258 at Texas public universities. An additional factor warranting notice is the decrease in enrollment at Texas public universities. In 1995, Texas public universities had 400,633 students. By 1998, these universities had only 398,258 students. In contrast, the number of students attending Texas public community and technical colleges increased from 408,606 in 1995 to 421,408 in 1998. With more students attending community and technical colleges, the number of students transferring to four-year schools has increased. In 1995, 75,298 students transferred from these two-year colleges to four-year universities while in 1998, 77,115 students transferred. These numbers beg the question, in Texas, why has the number of students transferring increased? Was the increase due to a change in articulation and transfer policy or something else? These developing patterns require further study to determine the effects of transfer and articulation policy in the state of Texas.

Besides increasing student populations and increasing community college attendance, the third and possibly the most important reason to study statewide articulation in Texas is the projected increase in the number of minorities in the state as well as the increase in the number of minorities enrolling at post-secondary institutions. Nationally, in 1997, minority enrollment at public community colleges exceeded enrollment at public four-year institutions. At four-year institutions, 1,585,800 minority

students were enrolled, while public two-year institutions boasted a minority enrollment of 1,752,400. In fact, minority-student enrollment at public two-year institutions is 31.7% of the total enrollment, but is only 24.3% of the total at public four-year institutions (The Chronicle of Higher Education, 2000).

According to the Texas Legislative Council (1996), minority population is also on the rise in Texas. In 1990, minorities made up about 40% of the almost 17 million people in Texas. By 2030, Hispanics alone are projected to account for 45.9% of the population, a growth of over 257%. In addition, African-Americans are expected to make up 9.5% of the population with other minorities accounting for 7.9%. Total minority population would amount to 63.3% of the total population by 2030. In fact, an estimated 87.5% of the total net change in the population of Texas from 1990 to 2030 will result from the statewide minority population growth. This increase will result in the Anglos decreasing to only 36.7% of the state's population by 2030.

Not only is the population projected to increase, but as the Texas Higher Education Coordinating Board (2000) reports more minorities are attending college as well. In 1998, 155,669 minorities were enrolled in Texas four-year institutions, up from 147,093 in 1995. In 1998, public community and technical colleges enrolled 188,698 minority students, up from 168,383 students in 1995. This number reflects an increase of 28,891 in minority enrollment in public institutions. With Hispanic students making up 19.1% of public university students and 27.8% of public community and technical college students, these students are the largest group of minorities in higher education today. As the number of minorities in the state increase and the number of

minority students beginning their collegiate pursuits at public community and technical colleges increase, articulation and transfer will be a vital part of the higher education landscape.

The fourth reason for studying articulation and transfer policy in Texas is the projected decrease in the average household income in state. The Texas Legislative Council (1996) reports by 2030, the number of households in this state that will qualify as impoverished is expected to increase 165%. The percent of households in poverty is projected to increase from 16.2% in 1990 to a projected 19.6% in 2030. In 1990, 47% of Texas households had incomes below \$25,000, but by 2030, 53.7% of households are projected to have incomes below \$25,000. In addition, the average household income is expected to decline from \$35,667 in 1990 to \$32,299 by 2030 (TLC, 1996).

With household income projected to decrease, the impact of the cost of higher education on the typical household income will be more pronounced. Nationally, classes at a public community or technical college average \$899 while the classes at the four-year institutions averages \$2,432, almost three times the cost (Chronicle, 2000). With this wide variance in costs, it becomes easy to see why more students are choosing to begin college at public community and technical colleges.

Not only is the cost of higher education burdensome to the family, the cost to the state has also increased. The Chronicle of Higher Education (2000) reports that state funding for higher education operating expenses was \$4,093,434,000 for the 1999-2000 school year, reflecting a 16% increase from the previous year. In addition, costs are projected to increase to \$6 billion by 2005 and \$7.6 billion by 2030, indicating a total

increase of 50.5%. As higher education costs increase, taxes increase as well. From 1990 to 2030, total state taxes for Texas are projected to increase 97.9% (TLC, 1996). Unfortunately, when household incomes decrease, these increased taxes will be an even greater burden on households in the state. Thus, transfer and articulation policies in Texas will benefit students from low-income households as the students take advantage of the low-cost of two-year institutions to start their post-secondary education.

The problems Texas faces related to higher education verify the need for a policy analysis of articulation and transfer among the states public institutions. Increasing populations, increasing student enrollments in two-year institutions, increasing minority populations, and decreasing incomes require policy action. Therefore, this study was designed to examine the reasons for the policies, the policy actions taken, and the resulting policy outcomes associated with articulation and transfer in Texas.

Definitions

Key terms must be defined to ensure understanding of the concepts related to articulation and transfer credit.

Transfer Rate: all students entering the community college in a given year who have no prior college experience and who complete at least twelve college-credit units, divided into the number of students in that group who take one or more classes at an in-state, public university within four years (Creech, 1995, p. 6).

Articulation: the systematic efforts, processes, or services intended to ensure educational continuity and to facilitate orderly, unobstructed progress between levels or

segments of institutions on a statewide, regional, or institution-to-institution basis (Bender, 1990).

Transfer: the mechanisms used by institutions to facilitate admission, credit recognition, and related services for students who seek to move from one institution to another expecting credit recognition from course-work successfully completed and expecting to be treated equitably with all other students (Bender, 1990).

Course Articulation, System-Wide: refers to faculty agreements establishing a set of courses offered by community colleges that are equivalent to similar courses offered by four-year universities and colleges (Moore, 1997).

Course Articulation, Major-Specific: refers to a set of courses university faculty accept as having the focus, content, and rigor necessary to meet course prerequisites for specific majors with lower division requirements (Moore, 1997).

Transfer Agreement: refers to a specific agreement a student enters into that stipulates admission, as an upper division student, is assured providing the student satisfies specific requirements delineated in the agreement (Moore, 1997).

Transfer Agreement Program: refers to the combination of programs, policies, and practices utilized by campuses to facilitate student transfer (Moore, 1997).

Transfer Eligible: refers to students who have completed the pre-requisite courses and units with a minimum GPA that meets or exceeds the GPA established by four-year institutions for regular admission as an upper division student (Moore, 1997).

Transfer Requirements: refers to published academic criteria that a student enrolled in a community college is required to meet in order to qualify for regular admission to a four-year campus (Moore, 1997).

Program Transfer Understanding: the understanding between a two-year and a four-year campus related to the number of semester credit hours a graduate, of an associate degree program offered by the two-year institution, can transfer to a baccalaureate degree program at the four-year institution (Indiana State Commission for Higher Education, 1996).

Segment: institutions of like mission that are formally or informally identified as a system within the state, such as the two-year segment, state college segment, or university segment (Bender, 1990).

Intersegmental: two or more segments of a state's postsecondary education delivery system that plan and work together to resolve problems or issues, enter into mutual agreements, and coordinate programs (Bender, 1990 p. 7).

Construct Validity: the extent to which a measure used in a case study correctly operationalized the concepts being studied (Gall, Borg, & Gall, 1996, p. 571).

Reliability: the extent to which other researchers would arrive at similar results if they studied the same case using exactly the same procedures as the first researcher (Gall, Borg, & Gall, 1996, p. 572).

Assumptions

The following are assumptions in this research:

1. The Texas Legislature and Texas Higher Education Coordinating Board have become more interested in transfer and articulation during the past two decades.
2. Documents associated with policy actions in Texas can be located.
3. The documents found will indicate the reasons for the policies, the policy actions taken, and the resulting policy outcomes.
4. The researcher will be able to get access to the documents.

Delimitations

The following are delimitations in this research:

1. The study only used articulation and transfer policy in Texas.
2. Information used was limited to content analysis of public documents and transcripts of committee hearings.
3. The study examined only two-year to four-year transfer and articulation policies, not high school transfer or tech-prep.
4. This study only examined statewide policies and not school specific policies.

Limitations

The following limitations apply to this research:

1. Only current policy was considered in this study.

2. Reasons for policy actions were limited to information obtained through content analysis of public documents from the Texas Legislature and the Texas Higher Education Coordinating Board and transcripts for legislative committee hearings.
3. Findings cannot be generalized to other states.
4. Policy outcomes were limited to information available.

Chapter Summary

State legislators have become increasingly involved in the higher education. Furthermore, as Kerr (1991) points out, higher education can expect more direction from the state policy makers in the future. These policy changes effected from the highest levels of government have prompted modifications within higher education. One such modification relates to the transfer of course credit between higher education institutions. Increasingly, students are transferring between these institutions across the country and Texas. Consequently, transfer and articulation have become an important aspect of higher education policy. Policy analysis techniques were utilized to examine the reasons for the increased attention to articulation and transfer issues.

In Texas, articulation and transfer has become important to the state's higher educational future due to an increase in the number of high school graduates, the number of minorities beginning post secondary education at community colleges, the cost of educational services, and the population, paired with a decrease in household income. This chapter introduces a policy analysis study focused on articulation and transfer in the state of Texas. The remainder of the dissertation will explore the policy in this state as

well as describe the methods used for analysis and the resulting outcomes related to policy actions. Chapter II includes a review of scholarly literature in the area of policy analysis, articulation, and transfer. In Chapter III, the methodology used during the study is described emphasizing research design, data collection procedures, data analysis procedures, and documentation. In Chapter IV of the dissertation, the data collected is analyzed. Finally, conclusions and recommendations for future research are covered in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Throughout its history in this country, legislative action has brought about changes in higher education. For example, in 1862, Congress passed the Morrill Federal Land Act, which changed "the outlook of the American people toward college-going" (Rudolph, 1962, p. 247). America was faced with the problem of its emergence from an agrarian society to an industrial society. Consequently, the nation required new training and preparation for employees in order to mobilize the needed work force. Thus, the Morrill Act became the policy action created by Congress to address and correct this workforce dilemma by opening the door to previously unserved students and by paving the way for courses never before taught in higher education. As a result of these actions, more people participated in higher education. Unfortunately, the authors of the Act failed to consider that some institutions were excluding African Americans. Thus, in 1890 the second Morrill Act was enacted. This second Act denied funding to any state that refused admission based on race unless that state funded separate institutions for minorities (Rudolph, 1962). Besides the Morrill Act, other legislative policy actions have impacted higher education including the Serviceman's Readjustment Act of 1944, the Truman Commission Report of 1947, and the Higher Education Act of 1965 and its reauthorizations.

As an addition to universities, the creation of the community college increased access to higher education. In 1901, under the direction of University of Chicago

President William Rainey Harper, Joliet Junior College was founded. As the oldest public junior college, Joliet paved the way for the creation of the more than 1,000 public and independent community colleges that exist today (AACC, 2000). According to Cohen and Brawer (1996), the community college mission focuses on five areas:

- Academic Transfer Preparation,
- Vocation-Technical Education,
- Continuing Education,
- Remedial/Developmental Education,
- Community Service. (p. 330)

Through legislative action and the creation of community colleges, the numbers of students attending higher education institutions has increased dramatically. In fact, by 1997, there were 1,276 public and private two-year institutions with a total enrollment of 5,605,569 students. By 2010, enrollment in two-year institutions alone is projected to surpass 6.5 million students (Chronicle, September 2000, p. 7). Thus, academic transfer preparation has become an important function of the higher education institutional mission.

Not only has the number of students attending higher education increased, but the percentage of students attending two-year colleges with the intention of attending a four-year institution has increased as well. In 1989-90, according to National Center for Education Statistics (1996), one out of every four students entering a two-year institution indicated an intention to continue their education to the baccalaureate level. Of all students beginning undergraduate work at two-year institutions in 1989-90, forty-three percent transferred to a baccalaureate institution by 1994. Many students who had not planned to transfer decided to continue their education past the associate degree level.

Additionally, 28% of the students beginning their college careers at four-year institutions transferred to other colleges or universities. As the number of students transferring increased, articulation and transfer efforts become an even more important aspect of the higher education landscape.

Development of Articulation and Transfer

With this emphasis on transfer, the primary purposes of community colleges' has been to accept post-secondary school students, provide the students with a general education, introduce students to collegiate studies, and send the students on to senior institutions for the baccalaureate (Cohen & Brawer, 1996). In higher education circles, this process is referred to as academic transfer. Bender defines transfer as "the mechanisms used by institutions to facilitate admission, credit recognition, and related services for students who seek to move from one institution to another expecting credit recognition from course-work successfully completed and expecting to be treated equitably with all other students" (Bender, 1990, p. 2).

Transferring credit from one institution to another, especially from a two-year school to a four-year school, poses some problems. According to Cohen and Brawer, "certain courses may not be acceptable, some university departments may require alternate courses, and transfer may not guarantee entry to the particular program a student desires" (Cohen & Brawer, 1996, pp. 330-331). Other factors influencing the transfer of courses between institutions include lack of consistency in course transfer, loss of credits between institutions, credits not applicable for graduation, inadequate or nonexistent

transfer information, and changing degree requirements (Bender, 1990; Coleman, 1991; Creech, 1995, 1997; Florida State Department of Education, 1988; Harden, 1991; Hughes, 1997; Illinois Community College Board, 1989; LeMon & Pitter, 1996; Montana Higher Education Commission, 1991; Moore, 1997; Nebraska Coordinating Commission for Postsecondary Education, 1993; Oregon State System of Higher Education, 1998; Virginia State Council of Higher Education, 1991).

From the creation of the community college movement, agreements have existed between two-year and four-year institutions to ease the transfer of students between institutions (LeMon & Pitter, 1996). These agreements between institutions were primarily informal and covered course, program and curriculum equivalencies insuring easy transfer of credit from one institution to another for students completing programs under specific conditions.

However, these informal arrangements were generally replaced with official documented agreements known as articulation agreements. Ernst (1978) defined articulation as "a systematic coordination between an educational institution and other educational institutions and agencies designed to ensure the efficient and effective movement of students among those institutions and agencies, while guaranteeing the students' continuous advancement in learning" (p. 42). Wilgoren (2000) stressed the basic purpose of articulation is to increase the number of students, especially minority students, who continue their education through the baccalaureate level with minimal duplication of course work.

During the 1980s and 1990s, increased state activity to improve education created a new awareness of the way public education operated. As a result, new efforts concerning articulation started to develop (Center for Policy Research in Education, 1989). For instance, in California, a survey by the office of the Chancellor of the California Community Colleges (1982) sought to identify current policies and practices assisting transfer students. As a result, 106 community colleges were surveyed regarding activities aimed at identifying and assisting potential transfer students. The study found that 69% of the schools surveyed had formal articulation agreements with four-year institutions and 52% of community colleges had regular liaisons with local high schools. In fact, another study by the Office of the Chancellor (1986) found that articulation had become such an important part of the community colleges activities that in 1985 the first California handbook for articulation policies and procedures was published, intersegmental efforts to promote faculty communication concerning articulation activities statewide had begun, and fifty-nine colleges were participating in the California Articulation Number System. In another California study on transfer, the California State Postsecondary Education Commission (1984) examined the views of individuals representing a variety of segments of higher education in California concerning current community college transfer activities. Some interesting findings of the study suggest that articulation needs to begin with the lower grades and continue through the graduate level and that transfer problems cannot be solved by any one segment of education or by any group of people acting alone.

During the 1990s, according to the annual report of the Arizona Board of Regents and the State Board of Directors for Community Colleges of Arizona (1999), the Arizona Legislature directed the state's public universities and community colleges to work together to articulate courses between the two types of institutions. A Joint Conference Committee (JCC), consisting of members from both the Arizona Board of Regents and the State Board of Directors for Community Colleges of Arizona, was charged with direct oversight for achieving cooperation and collaboration in achieving articulation. The legislative intent of the JCC was to insure that the statewide articulation and transfer system not unnecessarily duplicate programs and include a process for transfer of lower division general education credits, general elective credits, curriculum requirements for majors, and community college students be able to transfer to Arizona public universities without losing credit toward a baccalaureate degree. According to the report, the Arizona public community colleges and universities have jointly worked together to meet the needs of Arizona citizens. Accomplishments include community college and university partnerships, increased access to baccalaureate programs through new university degrees and partnerships, new transfer degrees, new general education requirements, new common requirements for equivalent majors, new limits on the amount of work that can be transferred from a community college into a baccalaureate program and creating transfer blocks. These accomplishments have created new pathways for students to transfer credit from one Arizona school to the next.

The Arizona Board of Regents and the State Board of Directors for Community Colleges of Arizona regularly report to the Legislature on the progress of implementation

of a new transfer model. This transfer model addressed the needs of students through new transfer degrees, general education requirements, common requirements for equivalent majors, limits on the amount of work that can be transferred from a community college into a baccalaureate program, and block transfers.

In Florida, articulation is handled differently. While other states rely heavily on agreements between institutions, Florida has a statewide articulation system. The statewide arrangement is accomplished through a 2 + 2 system. Under the 2 + 2 system, the two-year junior colleges act as feeder schools for the state's universities. Florida's design initially called for university-parallel courses to be offered exclusively at the lower level. The upper-level institutions were then designed to receive the lower-division students by providing the final two years of the four-year education. Articulation was, therefore, a must from the beginning of the creation of the higher education system.

To support the 2 + 2 system, the "Articulation Agreement, Rule A-10.024 of the Florida Administrative Code, formally established articulation requirements between and among universities, community colleges, and school districts in 1973" (Palinchak, 1988). The rule provides that all education institutions provide articulated programs that enable students to accomplish their educational objectives as quickly as possible. The administrative rule calls for written procedures, accelerating mechanisms, exchange of ideas, and improvement of programs of general education (Palinchak). This requires public higher education institutions to accept one another's general education programs with the basic general education program consisting not less than thirty-six semester hours of credit. Through the authority of the articulation rule, when a student

satisfactorily completes a program and is certified, no other public college or university may require the student to take any additional lower division general education courses (Palinchak, 1988).

An increasing number of students enroll in community college. In fact, of the students who entered in 1993 with no prior college experience, 50.7% completed 12+ credits at the community college (Texas Higher Education Coordinating Board, 2000, p. 7). A significant number of these students transfer to four-year institutions. According to data from the 13 states who participated in the 1999 transfer assembly, some 65,728 students transferred to in-state public universities within four years in 1991 compared to only 9,316 in 1984. The original intent of the articulation of transfer credit was to provide the student with a smooth transition from two-year schools to four-year institutions. Carefully developed college transfer policies increase the number and percentage of students who complete two and four-year degrees thus saving student and taxpayer dollars (Creech, 1997).

Regardless of the catalyst behind articulation and transfer, whether college-to-college or state wide, articulation has been found to benefit the student. Cejda (1998) conducted a study designed to develop a "seamless" educational experience focused on transfer as an academic matter. The project focused on transfer students who were between 18 and 22, completed the Associate of Arts degree from a community college, enrolled at the liberal arts college on a full-time basis, and would live on-campus. Two samples were identified, one (collaboration) consisting of 64 students transferring from a community college that developed a curriculum guide to aid the transfer process and the

second (non-collaboration) sample contained 60 students in the same majors transferring from a community college with no curriculum guide to aide the transfer process.

Cejda (1998) found that there was a significant difference between the mean GPA change of students in the collaboration sample and the students in the non-collaboration sample. In fact, the majority, 59%, of the students in the collaboration sample experienced unchanged or increased grade point averages while the majority, 73%, of the students in the non-collaboration sample experienced GPA declines. While the sample was limited, the study still demonstrates that "[c]ommunity colleges continue to play an important role in baccalaureate education. ... Both two- and four-year institutions must accept shared responsibility for continued efforts to meet the challenge of effective academic transfer" (Cejda, 1998, p. 75). Thus, articulation is a vital part of the transfer function.

Unfortunately, recognition of the need for articulation agreements and transfer policies has not come easily. In fact, studies have shown that local educational policy makers have failed to voluntarily work together to coordinate articulation and transfer activities. As a result, during 1989 the legislatures in at least 13 states considered bills or passed resolutions calling for action on transfer or articulation issues (Bender, 1990). In many instances, the absence or failure of local voluntary articulation has been met by state-level mandatory policies. Accordingly, legislative action has been cited in numerous studies as the key reason for advances in statewide articulation (Arizona Board of Regents, 1998; Banks, 1992; Cepeda, 1991, 1994; Coleman, 1991; Florida State Department of Education, 1988, 1994; Harden, 1991; Hughes, 1997; Illinois Community

College Board, 1989; Illinois State Board of Higher Education, 1994, 1996a, 1996b, 1997; Indiana State Commission for Higher Education, 1996a, 1996b; LeMon & Pitter, 1996; Lynch, 1994; Montana Higher Education Commission, 1991; Moore, 1997; Nebraska Coordinating Commission for Postsecondary Education, 1993; Nussbaum, 1997; Oregon State System of Higher Education, 1998; Rhode Island State Board of Governors for Higher Education, 1999; Valencia, 1993; Virginia State Council of Higher Education, 1991; Williams, 1990).

Over the next decade, demographic changes will increase the importance of articulation and transfer credit. For instance, the nationally high school graduation rate is projected to increase some 50%. In addition, by the year 2005 California alone will have an estimated 455,000 students participating in higher education programs (Hughes, 1997, p. 6). Furthermore, recent studies have found that some 37% of baccalaureate graduates complete their education at a different institution from the institution in which the student entered higher education (NCES, 1996), with more than 50% of first-time college students beginning their studies at a community college (Cohen & Brawer, 1996). Consequently, articulation and transfer policies continue to be an important aspect of higher education.

The reasons associated with the establishment of an articulation and transfer policy vary from state to state. For instance, Florida designed a system to enable students to begin their collegiate careers at a community college and transfer credit to a four-year institution (Florida State Department of Education, 1988). California developed a three-tier system for collegiate education that allows only the best and brightest students to

attend the University of California system while requiring the remaining students to attend the California State or community college system (Moore, 1997). Similar to Florida and California, most states have some sort of legislative mandate or statutory law guiding the process of transfer between institutions of higher learning (AACJC, 1990).

After reviewing the current literature on articulation and transfer, two states emerge as leaders in the articulation and transfer policy arena, California and Florida. The studies conducted in these states clearly identify the three stages of policy analysis. Specifically, the literature outlines the reasons for the policies, the policy actions taken, and the resulting policy outcomes associated with statewide articulation and transfer in these states. Therefore, the literature review related to articulation and transfer policy will be limited to these comprehensive examples.

California

The Reasons

California, like other states, is faced with the changing demographic composition of its state population (Moore, 1997). Research from a variety of viewpoints has identified many factors demonstrating the need for increased attention to statewide articulation and transfer. Research reveals that competing priorities (Cepeda, 1994), diminished resources (Cepeda, 1994; Hughes, 1997; Moore, 1997), increased student demand (Cepeda, 1994; Hughes, 1997; Moore, 1997), changing student needs (Cepeda, 1994; Hughes, 1997; Moore, 1997), transfer problems (Hughes, 1997; Moore, 1997), limited minority access and transfer (Hughes, 1997; Moore, 1997; Williams, 1990),

inadequate or nonexistent transfer information (Moore, 1997), changing degree requirements (Moore, 1997), higher educational costs (Hughes, 1997; Moore, 1997), expanded educational opportunities (Hughes, 1997; Moore, 1997), and limited growth in the number of students transferring (Hughes, 1997; Moore, 1997) have all influenced student transfer between California's higher education institutions. These factors have been addressed by policy actions.

The Policy Action

As with most states, statutory law provides direction for California's articulation and transfer process. In the state's Education Code, postsecondary education leaders are required to:

Have as a fundamental policy the maintenance of a healthy and expanded student transfer system and ensure that individual university and college campus enrollment plans include adequate upper division places for community college transfer students in all undergraduate colleges or schools, and that each undergraduate college or school on each campus participates in developing articulation and transfer agreement programs with the community. (Donahoe Higher Education Act chapter 9.2 article 2 §66730 (a))

In addition, the code provides:

Each department, school, and major in the University of California and California State University shall develop, in conjunction with community college faculty in appropriate and associated departments, discipline-specific articulation agreements and transfer program agreements for those majors that have lower division prerequisites. Faculty from the community colleges and university campuses shall participate in discipline-specific curriculum development to coordinate course content and expected levels of student competency. (Donahoe Higher Education Act chapter 9.2 article 2 §66740)

In other works, California law requires state post-secondary institutions to develop and implement articulation agreements and transfer program agreements to adequately address the transfer of students between institutions.

In addition, the Trustees of the California State University have reviewed and approved the issuance of three Executive Orders (EO) that authorize community colleges to certify transfer course credit at three levels:

1. EO – 167 (issued in 1972) – authorizes community colleges to certify lower-division coursework for at least elective credit toward the baccalaureate degree at all State University Campuses.
2. EO - 405 (issued in 1982) – authorizes community colleges to certify completion of the State University's requirements for U.S. History, Constitution and American Ideals.
3. The final order, EO – 595 (issued in 1992, replaced EO 338 which was issued in 1981) – allows the community colleges to certify coursework completed toward the CSU General Education Breadth program and permits certification of the Intersegmental General Education Transfer Curriculum (IGETC) completion as fulfillment of the State University's lower-division general education requirements. (Moore, 1997, p. 28)

Through these statutory requirements and executive orders, articulation and transfer have become an important part of postsecondary education in California.

The Policy Outcomes

Research reveals the efforts of the California Legislature have successfully addressed the problems policy actions sought to correct. Moore (1997) reports that from 1990-1995, the proportion of new transfer students increased from 75 to 80.5%. In addition, "approximately one-half of CSU and one-fourth of UC bachelor degree recipients are California Community College transfers" (Moore, 1997, p. 15). With 57,476 more California high school students projected to graduate in 2004 than in 1993,

California could see a substantial increase in the enrollment of community college transfer students (Moore, 1997).

Florida

The Reasons

In contrast to the California system of higher education, the Florida system of postsecondary education was designed to be a "2+2 system" allowing students to enter a community college, complete two years, and then transfer to a university for the remaining two years (Florida State Department of Education, 1988). This 2+2 system was created to "widen geographic access to postsecondary education; first to lower division programs, then to baccalaureate education" (FSBCC, 1988, p 22).

Besides addressing geographic access, the Florida system faced another problem that needed correction, the competition for places in degree programs at the university level (LeMon & Pitter, 1996). Previous statewide articulation and transfer efforts had been designed to provide equal access to students from both the community college and the university. Unfortunately, both groups had to compete for a limited number of slots in each university program. Thus limited program availability coupled with the growing student demand for access created an access problem. Additionally, prerequisites for the same undergraduate degree programs differed among various institutions and leveling was not available for many courses. With the combined pressures of limited educational funding obtained from sales tax revenue, an unwillingness of Florida constituents to pay more taxes, and a fluctuating tourism and agriculture industry, the Florida Legislature

focused on reforming the operational infrastructure of the higher education system in order to increase its effectiveness and accountability.

In addition to geographic access and limited availability problems, the Florida higher education system faced many other factors that contributed to the development of a statewide articulation and transfer policy. These factors include skyrocketing population growth (Florida State Department of Education, 1988), problems in transferring credit from two-year to four-year institutions (Florida State Department of Education, 1988; Harden, 1991), minority access (Florida State Department of Education, 1988), accountability (LeMon & Pitter, 1996), and concerns related to excessive time to degree (LeMon & Pitter, 1996). Once the factors contributing to the problems were identified, Florida tackled the issue with policy action.

The Policy Action

In Florida, the first articulation agreement was developed in 1959 and guaranteed the transfer of a block of credits between institutions. The General Education Agreement required all institution's general education program to contain a minimum of "36 semester hours of college credit in the liberal arts and sciences for students working towards a baccalaureate" (Florida State Board of Education, 1988, p. 23). With skyrocketing population growth between 1958 and 1971, six new universities and 24 new community colleges were added to the states higher education system requiring Florida to again address the articulation issue in the 1970s and 1980s (FSBCC, 1988). In 1971, Florida developed a new agreement that defined the "associate in arts degree as the

transfer degree, reconfirming the General Education Agreement and the transfer of general education courses; established a common college transcript; called for a common course numbering system and common calendar; and established the Articulation Coordinating Committee" (FSBCC, 1988, p. 23). Not surprisingly, at the time the new agreement was adopted, it was cited as the most comprehensive articulation agreement in the nation (FSBCC, 1988).

In addition to the comprehensive articulation agreement, the Florida State Board of Education (1988) created and charged the Task Force on Articulation with: studying the process, programs, and activities currently in place that address articulation; identify potential and existing problem areas; recommending further studies; and identifying the appropriate agencies or organizations to conduct the studies. According to LeMon and Pitter (1996), Florida legislation enacted in 1996 required all baccalaureate degree programs to be reduced to 120 credit hours, general education requirements at all state institutions to be reduced to 36 hours, and common degree program prerequisites to be standardized, offered, and accepted by the twenty-eight community colleges and nine public universities. Thus, legislative policy was enacted to address the problems of the state higher education system.

The Policy Outcomes

Before the legislative policy initiatives of 1996, approximately 300 degree-programs exceeded 120 credit hours to obtain a degree. As a result of Florida legislation, degree programs by credit hours were reduced by a total of 1,571 credit hours (LeMon &

Pitter, 1996). However, this balancing of the number of credit hours required for a degree also brought about standardization of programs across disciplines.

Similarly, prior to the 1996 legislation, prerequisites for the same undergraduate degree differed among institutions and the courses were frequently not on the same level at different institutions (LeMon & Pitter, 1996). Following the 1996 legislation, common degree program prerequisites were offered and accepted by all of the state's universities and community colleges. In addition, an upper or lower level was assigned to each course. These findings demonstrate that many of the articulation and transfer policy actions fulfilled the intended outcomes.

Conclusion

Analysis of articulation and transfer policy has become a vital part of higher education research and especially higher education governance. Changing demographic composition of states, competing educational priorities, and increasing minority attendance at two-year rather than four-year institutions, as well as other factors, have been the catalyst for states to create new articulation and transfer policies. Frequently, these policies, developed by cooperative as well as legislative efforts, have streamlined the transfer process and provided an opportunity for more students to reach their educational goals. Increases in transfer student enrollment and an acceptance of common degree program prerequisites have proven that statewide articulation and transfer efforts can be beneficial to the student as well as the state.

CHAPTER III

PROCEDURES

Policy analysis includes a review of the reasons for the policies, an examination of the policy actions taken, and an evaluation of the resulting outcomes. In designing the methodology for this study, a research design was needed that incorporated these why, how, and what questions. Schramm (1971) states the central tendency among all types of case studies is to try to illuminate a decision or set of decisions - why they were taken, how they were implemented, and with what result. Therefore, a case study methodology was chosen as the research design for this study. Once the primary research design was determined, the database of Dissertation Abstracts International (DAI) was searched and 1661 dissertations from 1995-2001 were identified that, if not entirely, extensively used case study methodology as the basis for the research. Using the keywords of higher education, case study, and policy analysis, a search of DAI between January 1999 and March 2001 identified 20 dissertations (Table 3.1).

Table 3.1
Higher Education Dissertations Using Case Study and Policy Analysis Methodology

Author	Date of Study	School	Topic
Borofsky, D.B.	1999	Univ of New Jersey – Rutgers	Community College
Brown, R.S.	1999	University of Toronto	Curriculum
Cusker, E.R.	1999	University of New York	Higher Education
Dare, L.A.	1999	North Carolina State Univ.	Administration
El-Kaffass, I.S.	1999	Bowling Green State Univ	Administration
Fabianke, J.W.	1999	Baylor University	Administration
Harris, L.E.	1999	University of New York	Sociology
Herbert, F.F.	1999	University of Wisconsin	Professional Development
Hyun, H.H.	2000	Harvard University	Law
Libby, J. D.	2000	University of Maine	Political Science
Monk, D.L.	1999	Oklahoma State University	Sociology
Moon, A.K.	1999	Miami University	Community College
Nelson, D.M.	1999	University of Wisconsin	Administration
Pusser, B.	1999	Stanford University	Political Science
Rivera Vargas, M.L.	2000	University of New York	Technology
Small, E.	1999	University of Akron	Administration
Smith, P.N.	1999	University of New Orleans	Administration
Symcox, L.S.	1999	University of California LA	History
Uhlik, K.S.	1999	Kent State University	Political Science
Williams, G.E.	1999	Harvard University	Community College

An examination of these 20 dissertations helped to further develop the research design for this study. Each respective dissertation utilized some form of case study methodology to conduct policy analysis on a variety of topics. Furthermore, two methods of collecting data were predominant in these 20 dissertations. Eighteen of the twenty dissertations utilized content analysis as a means of gathering information and sixteen collected data through some type of interview. Based on a review of these resources and reliance on case study authorities, the following research design was developed.

Research Design

This investigation incorporates a case study approach. Yin (1984) defines the case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between the phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 23). Case study allows the researcher to link events over time revealing organizational processes and providing opportunity for process evaluation. As a research method, the case study provides a varied contribution to the knowledge of individual, organizational, social, and political phenomena.

In conducting the case study for this research, content analysis was the primary method of gathering data. The content analysis allows for information to be examined in an objective, systematic manner (Gall, Borg, & Gall, 1996). Gall et al. (1996) defined five steps as components of content analysis:

1. identification of documents relevant to the research.
2. specification of research questions to be addressed by the analysis.
3. selection of the sample to analyze.
4. development of a category-coding procedure.
5. analysis and interpretation.

These five steps were utilized in the analysis of policies related to articulation and transfer in the state of Texas.

Documents Used in Analysis

Data for this research was gathered from legislative reports, statutory law, education committee hearing transcripts, and policy statements and publications of the

Texas Higher Education Coordinating Board. Database searches on West Law, ERIC, Texas Legislature On-line, Texas Statutes On-line, and The Texas Higher Education Coordinating Board web site identified these materials.

The documents selected for the content analysis follow Yin's (1994) recommendation for using multiple sources of evidence. According to Yin's suggestions, the researcher reviews and analyzes a variety of information concurrently, allowing the study's findings to be based on a convergence of information from an array of sources. Multiple sources of evidence in case studies permit the researcher to examine a more extensive range of data addressing the issues in question. This approach incorporates both rigor and flexibility in the research design and allows the researcher to examine a broader range of issues than a single source of data would permit. Yin emphasized, "case studies using multiple sources of evidence were rated more highly, in terms of their overall quality, than those that relied only on single sources of information" (1994, p. 92).

Research Questions

Research questions are the driving force behind any investigation. This study asked "what," "how," "why," and "who" questions. Therefore this study addressed the following questions:

1. What policy actions concerning articulation and credit transfer have been developed in Texas?
 - a. What steps were taken to develop articulation and transfer policy in Texas?

- b. Who was involved in the process of developing articulation and transfer policy in this state?
 - c. What changes were required within state and institutional governance to establish the articulation and transfer policies?
 2. What reasons led the state of Texas to adopt articulation and transfer policies?
 - a. What occurrences prompted concern related to the transferring of credit from two-year institutions to four-year institutions?
 - b. Why did the Legislature become involved with articulation and transfer policy in this state?
 - c. Why did the Texas Higher Education Coordinating Board become involved with articulation and transfer policy in this state?
 3. After policy actions were initiated, what were the resulting outcomes?
 - a. Who was affected by these articulation and transfer policy changes?
 - b. Who enforces the states articulation and transfer policies?
 - c. Has the articulation and transfer policy been assessed and, if it has, how was the policy assessed?
 - d. Did the articulation and transfer policies adopted by the state of Texas alleviate the concern?

These research questions guided the policy analysis of articulation and transfer in Texas.

Answering the Research Questions

Answering the questions identified above required review and analysis of information from a variety of sources. The sources required to address these questions are listed below.

Research Question One

What Policy Actions concerning articulation and transfer have been developed in Texas?

To answer research question one, current as well as past state legislation was reviewed to identify changes in the state's articulation and credit transfer policy. Other sources of information included legislative reports, policy statements and publications from the Texas Higher Education Coordinating Board, and current state law. The information was divided into five categories. The seven categories are listed in Table 3.4.

Research Question Two

What reasons led the state of Texas to adopt articulation and transfer policies?

Once policy actions were identified, an answer to question two required an examination of the committee reports and hearing transcripts associated with each policy action. Analysis was categorized using the five groups identified in previous research related to the same topic. Table 3.2 on page 63 provides the five categories of Student Issues, Articulation and Transfer of Courses in Curricula, Resource Constraints, Time to Degree, and Other.

Research Question Three

After policy actions were initiated, what were the resulting outcomes?

Research question three was addressed by investigating a variety of sources. The Texas Higher Education Coordinating Board gathers data from all higher education institutions in Texas and presents the findings to the Legislature through a variety of reports. These reports were the basis of much of the research presented in this study.

Selection of the Case

Researchers cite a variety of reasons for choosing a particular case. Stake (1981) defined three types of case studies categorized by the researcher's reason for choosing to study a particular case. First, intrinsic case study is undertaken to enable the researcher to better understand a particular phenomenon. The case studied does not necessarily represent other cases, but is chosen because of the particular case's intrinsic interest to the researcher. Second, in an instrumental case study, the case is of secondary interest to the researcher. The selection of the case is designed to facilitate understanding of something else, leading to the pursuit of an external interest. In other words, "the choice of case is made because it is expected to advance our understanding of that other interest" (Stake, 1981, p. 88). Because of the variety of researchers' interests, there is no clear line to distinguish between intrinsic case study and instrumental case study. According to Stake, only a zone of combined purpose separates these study methods. In contrast, the collective case study looks at a variety of cases together to examine a phenomenon of interest to a researcher. The cases chosen for a collective case study are chosen "because

it is believed that understanding them will lead to better understanding, perhaps better theorizing, about a still larger collection of cases" (Stake, 1981, 89). Thus, the type of case study chosen identifies the reasons for analyzing specific cases.

This study can be described as an instrumental case study. Specifically, the case selected is articulation and transfer policy development in the state of Texas. The case of Texas was not chosen primarily because of an intrinsic desire to understand a particular phenomenon in the state. Rather, the choice of Texas plays a supportive role in the study designed to facilitate understanding of articulation and transfer policy development. Articulation and transfer policy actions in Texas would detail the activities of the various agencies involved in the process. The information, while of intrinsic interest to the researcher, will lead to a deeper understanding of the function of articulation and transfer policy and its effects on higher education.

The selection of Texas as the basis of the study was prompted by several factors. First, the United States does not have a national system of higher education but rather a state system of higher education. Thus, to conduct a case study on articulation and transfer policies, the study must focus on the state level, not the national level. Next, Stake (1981) suggested that when a case is selected, emphasis should be placed on choosing a case that seems to offer an opportunity to learn. For instance, Rhode Island, with a small number of four-year and two-year institutions would not provide a great opportunity to learn about articulation and transfer issues within a state. To provide a greater learning opportunity, a state with a more complex higher education system is required. California and Florida have unique systems of higher education and provide a

good opportunity for the investigation of articulation and transfer issues at the state level. However, several studies have already examined articulation and transfer issues in these two states (Bender, 1990; Cepeda, 1991, 1994; Creech, 1995, 1997; Florida State Department of Education, 1988, 1994; Harden, 1991; Hughes, 1997; LeMon & Pitter, 1996; Lynch, 391102; Moore, 1997; Nussbaum, 1997). Consequently, this study required examination of articulation and transfer in a different state.

Besides possessing the opportunity to learn, the selection of a case study examining articulation and transfer requires selecting one of the larger, more populous states. Texas and New York are the other most populous states, and therefore, warranted a closer look. During the past decade, the Texas population increased significantly, to an estimated 20.8 million people, promoting the state to the second most populous in the nation (Census, 2000). In addition, Texas is the second largest state in geographic size (Census, 2000). Finally, little research was found that examined articulation and transfer in Texas. After conducting the review of literature detailed in Chapters I and II, only three studies examined articulation and transfer in Texas. Because of the statewide Coordinating Board, a variety of educational institutions, the population, and the vast geographical size of the state, Texas was selected as the case for this research.

Category – Coding Procedures

In order to develop coding procedures for this case study, the literature available on articulation and transfer policy was examined, focusing on three aspects related to policy analysis: the reason for the policy, the policy action taken, and the resulting policy

outcome. The information drawn from the literature was used in the development of categories for the policy analysis in this study.

Current research suggests a number of reasons for the need in the change of articulation and transfer policy. A review of the literature from January 1988 to March 2000 using "articulation" and "transfer credit" as major descriptors on the ERIC, Journal of Higher Education, and World Wide Web databases, identified a variety of studies addressing these issues. After reviewing the studies and articles, searching specifically for information on statewide studies dealing with academic transfer and articulation issues, 39 articles were selected. From these articles, 24 reasons were identified in the increased emphasis on articulation and transfer policy revision (Table 3.2).

Table 3.2
Reasons by Category for Articulation and Transfer

Category	Reasons
Student Issues	Competing Priorities, Increased student demand, Changing student needs, Expanded educational opportunity, Low minority transfer, Low scores, Access, Students begin at C/C
Articulation and Transfer of Courses in Curricula	Inconsistent transfer and application of credit, Inconsistent acceptance of AA/AS transfer degree, No Consistency of Transfer, Bad or no transfer information, Classes not applicable, Changing degree requirements, Needed articulation, Transfer throughout state, No growth in transfer, Ineffective communication, Transfer Troubles
Resource Constraints	Diminished resources, Higher education costs
Time to Degree	Time to degree
Other	Accountability

After closer examination of the 24 reasons identified, common threads allowed further compacting of the categories. For example, one of the final categories focuses on student issues. Related sub-areas blended into the main heading of student issues include limited minority access, changing student needs, and an increasing number of students beginning post-secondary studies at community colleges. Through this consolidation, five categories of reasons for increased emphasis on articulation and transfer emerged: Student Issues; Transfer Troubles; Resource Constraints; Time to Degree; and Other. These five common groups will form the basis for the categorization of factors leading to articulation and transfer initiatives in the state of Texas. Table 3.3 lists the consolidated categories suggested by the research and the state in which the issues were reported.

In addition to the wide variety of reasons identified by the articulation policy research, the resulting policy actions are numerous as well. From the 39 articles mentioned above, 29 showed that articulation and transfer actions were initiated by some sort of Legislation (Arizona Board of Regents, 1996, 1998; Banks, 1992; Cepeda, 1991, 1994; Coleman, 1991; Florida State Department of Education, 1988, 1994; Harden, 1991; Hughes, 1997; Illinois Community College Board, 1989; Illinois State Board of Higher Education, 1994, 1996a, 1996b, 1997; Indiana State Commission for Higher Education, 1996a, 1996b; Lynch, 1994; Montana Education Commission for the Nineties and Beyond, 1991; Moore, 1997; Nebraska Coordinating Commission for Postsecondary Education, 1993; Nussbaum, 1997; Oregon State System of Higher Education, 1998; Rhode Island State Board of Governors for Higher Education, 1999; Valencia, 1993;

Virginia State Council of Higher Education, 1991; Williams, 1990). Table 3.4 lists the policy actions identified in the studies.

Table 3.3
Reasons for Articulation and Transfer

Factor leading to policy	States
Student Issues	Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Montana, New Jersey, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Virginia, West Virginia
Articulation and Transfer of Courses in Curricula	Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Montana, Nebraska, New Jersey, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Virginia, West Virginia,
Resource Constraints	Alabama, Arkansas, California, Florida, Georgia, Indiana, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, Montana, Nebraska, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
Time to Degree	Alabama, Arizona, Arkansas, California, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
Other	Arkansas, California, Florida, Indiana, Montana, Texas

Table 3.4
Actions by Category

Category	Action
Curriculum Related Policy	Created General Education Core, Created Common Core
Transfer and Application of Credit Policy	How the application and transfer of credit is conducted, Examined how AA/AS transfer degree is handled, Study examined if statewide agreements already existed, Clarified degree requirements, Created policy, Changed the way various programs operate, Established course-by-course articulation, Examined course-by-course articulation, Created 2+2 programs, Common course numbering, Called for transfer model, Called for block transfer, Called for common transfer format, Changed credit hour maximums, Created academic skills test, Called for common transcript
Established Committees to guide policy development	Established statewide committee, Assigned staff to help
Accountability Policy	Called for reporting and measurement, Called for accountability measures
Access Policy	Broaden minority access
Goals & Objectives	Developed goals, Created Objectives
Other	Developed concepts, Held hearings, Called for computerized programs, Called for common academic calendar

A closer examination of the 29 policy actions identified common threads that allowed further compacting of the categories. Related sub-headings were blended into five main policy actions and the states in which the actions were found are listed in Table 3.5.

Table 3.5
Articulation and Transfer Actions In order of Frequency

Actions	State
Curriculum Related Policy	Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Nebraska, New Jersey, North Carolina, Oklahoma, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia
Application of Transfer Credit Policy	Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Montana, Nebraska, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia
Committees to guide policy development	Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louise, Maryland, Mississippi, Montana, Nebraska, New Jersey, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Virginia, West Virginia
Accountability Policy	Arkansas, Arizona, California, Florida, Georgia, Illinois, Indiana, Montana, Nebraska, New Jersey, Texas, Virginia
Access Policy	California, Florida, Illinois, Indiana, Montana, New Jersey,
Goals and Objectives	Arizona, Arkansas, Florida, Illinois, Nebraska, Texas,
Other	California, Florida, Illinois, Kentucky, Louisiana, Maryland, Mississippi, Nebraska, North Carolina, Oklahoma, Tennessee, Texas, Nebraska

To categorize the outcomes necessary for research, this dissertation used the categories established in the Transfer Success Work Group Report outlined in Chapter I. In that study, the Texas Higher Education Coordinating Board along with the Texas Association of Junior and Community College Instructional Administrators created the Transfer Success Work Group to develop a concept paper examining the transfer function in Texas public community and technical colleges. The primary purpose of the work group was to determine if the transfer function in Texas public two-year institutions provided students increased pathways to success in their educational pursuits and to make recommendations regarding strategies and methods designed to improve student transfer (Timmer, 1995). Because the study identified key categories useful in examining transfer rates in Texas, those categories were used in this dissertation to determine the outcomes of the policies identified through the policy analysis. The categories will be reported by: student major; type of major and gender; type of major and ethnicity; and type of major and age group. Each report will use the following categories to calculate statewide transfer rates and will resemble the tables used in Chapter I.

- First Time in College: Integrated Postsecondary Education Data System (IPEDS) fall 1996 students as described in each table.
- # With 15 Hrs. 2 Sem: Focus sub-population: those students attempting at least 15 credit hours and enrolling at the same community college for two or more semesters.
- # Enr in CTC FY 2000: The number of students from column 2 still enrolled in a community or technical college during fall 1999 or spring 2000.

- % Enr in CTC FY 2000: The number of students from column 2 still enrolled in a community or technical college during fall 1999 or spring 2000.
- Cohort minus # Enr: The difference between columns 2 and 3 (students attempting at least 15 hours during at least two semesters at the same community college who were not enrolled in a community college during fall 1999 or spring 2000).
- Trans to Sr. Inst: The number of students from column 5 (Cohort minus # Enr) who transferred to a public senior institution in Texas.
- Trans Rate %: The percent of students from column 5 who transferred to a public senior institution in Texas.
- Trans or Still Enr %: The percent of students who transferred to a public senior institution in Texas or where enrolled at a public community or technical college in Texas during fall 1999 or spring 2000.
- % Persist: The percent of the students who transferred to a public senior institution in Texas who enrolled at that senior institution for two or more semesters. (based on Timmer, 1995)

Discussion of the findings is found in Chapter V.

The development of categories and coding procedures for this study also fulfills important criteria related to case study research. Yin (1994) pointed out that the organization and documentation of the data collected during research is a vital process in case studies. A case study database allows reports to be generated that contain enough data for the readers to reach their own conclusions about the case study. Additionally, the category and coding procedures provide the means to maintain a chain of evidence. Following this principle increases the reliability of the information and allows the external observer to more easily follow the process from the research questions to the case study conclusion.

Data Analysis and Interpretation

In qualitative research, data collection and analysis occur simultaneously. Emerging insights, hunches, and tentative hypotheses direct the next phase of data collection, which in turn leads to refinement or reformulation of the research questions (Merriam, 1988). Analysis involves "examining, categorizing, tabulating, or otherwise recombining the evidence, to address the initial propositions of the study" (Yin, 1984, p. 99). Thus, in this study, a database was created containing notes regarding the examination of reports, records, and other documents. Ultimately, several types of documents aid the analyst in uncovering meaning, developing understanding, and discovering insights relevant to the research questions (Merriam, 1988).

To organize the information, Yin (1994) suggested developing a database to collect and classify the data. Each research question identified in this study will have a corresponding database with data grouped using the categories explained above. As information is collected, the information will be inputted into the database using the key identifiers. These key identifiers will enable the researcher to monitor and manage the emergence of themes, concepts, or ideas. Categories can then be modified using the emerging themes or concepts identified by the researcher. Classification of the information will be driven by the study's purpose, the researcher's orientation and knowledge, and the constructs made explicit by the information gathered during the study (Goetz & LeCompte, 1984).

Confidentiality

In most studies, the researcher informs the subject at the outset of the study who will have access to the data. When research studies deal with controversial or sensitive topics, confidentiality is extremely important. However, in this study, the information gathered is a matter of public record and confidentiality issues are not present.

Bias

The affinity for error and bias in data collection are present in any research project. To minimize the effects of bias, case study researchers collect data from multiple sources and seek corroboration through other data collected. One key form of bias, which can affect a research project, is observer bias. This observer bias "refers to errors in observational data that are traceable to characteristics of the observer. One can argue that any observation made by human beings will contain some personal bias because all of us are influenced by our experiences and beliefs" (Gall, Borg, & Gall, 1996, p. 340). The key components of observer bias are: influence of participant labels; improper use of rating scales; and observer contamination. However, this study's basic design reduces the effects of these key components of observer bias. Personal bias is reduced in this investigation because the information gathered was gleaned from other people's generally written words. To reduce the effects of observer bias, the data was gathered through content analysis of legislative reports, statutory law, and policy statements and publications from the Texas Higher Education Coordinating Board.

Validity and Reliability

Certain formal procedures must be followed to ensure soundness of data during the collection process of any investigation. Yin (1994) offered four tests to establish the quality of any empirical research: construct validity; internal validity; external validity; and reliability. Internal validity examines causal relationships or explanatory studies and does not address descriptive or exploratory studies. Because this investigation will be descriptive in nature and not causal or explanatory, internal validity is not a factor. In addition, external validity will not be a factor in this investigation because the study establishes a domain to which the investigation's findings can be generalized. By limiting this case study to the state of Texas, the findings will not be generalized to other states.

In addition to internal validity, the remaining two tests establishing quality must be addressed. Construct validity simply means designing the case study to establish correct operational measures for the concepts being studied. To increase construct validity, Yin (1994) suggested two practices to follow during data collection: use multiple sources of evidence and establish a chain of evidence. Following these two suggestions, this investigation reviewed evidence from legislative reports, statutory law, and policy statements and publications from the Texas Higher Education Coordinating Board.

To increase reliability, Yin (1994) suggested two practices to follow during the data collection: use case study protocol and develop a case study database. Using case study protocol, this investigation provides details on the collection and analysis of data and demonstrates that the operations of the study can be repeated with the same results.

To further ensure reliability, a case study database was created as a central repository for the collected data. Yin stated that the main point of creating a case study database is "that every case study project should strive to develop a formal, presentable database, so that, in principle, other investigators can review the evidence directly and not be limited to the written reports. In this manner, a case study database markedly increases the reliability of the entire case study" (p. 95). Each research question has a corresponding database with data grouped using the categories explained above. As information is collected, the information will be put into the database using the key identifiers. These key identifiers will enable the researcher to monitor and manage the emergence of themes, concepts, or ideas. Categories can then be modified using the emerging themes or concepts identified by the researcher. Classification of the information will be driven by the study's purpose, the researcher's orientation and knowledge, and the constructs made explicit by the information gathered during the study (Goetz & LeCompte, 1984).

Anticipated Findings

Much has been written about higher education articulation and transfer by authors investigating other states. However in Texas, minimal information has been investigated or reported related to these issues. It is anticipated that detailed information concerning policy actions taken by the Texas State Legislature and the Higher Education Coordinating Board will be accessible. In fact, through committee reports and hearing transcripts, major issues concerning why articulation and transfer policy have become important will be plentiful. However, the amount of information available detailing the

results or the outcomes of the policy actions will be difficult to trace and report. Many times policy actions are implemented with the full intention to fix a specific problem, but are rarely ever reviewed or measured. I anticipate this lack of measurement or review may be the case with articulation and transfer policy in the state of Texas.

Chapter Summary

Following the guide of Yin (1994) and other case study research, this case study examined the statewide transfer and articulation process in Texas. Following Yin's first principle of collecting evidence, multiple sources of evidence will be examined to determine the origins, actions, and results of statewide articulation and transfer policies in Texas. Texas legislators have become more involved in the policy decisions of higher education. Thus, one source of evidence includes current as well as past legislation as the basis for policy decisions on the state level. Other sources to be examined include legislative reports, statutory law, and policy statements and publications from the Texas Higher Education Coordinating Board. In addition, the factors that lead to the policy actions will need to be determined in order to see if the outcome of the policy actions in fact address the reasons identified when the policy was adopted. Through this study, the articulation and transfer policy in Texas was thoroughly explored.

CHAPTER IV

DATA ANALYSIS

This study is a policy analysis of legislative policy actions and Coordinating Board mandates related to higher education articulation and transfer in the state of Texas. Utilizing policy analysis techniques, this dissertation investigated the activities of the Texas Legislature and the Texas Higher Education Coordinating Board (to be referred to as the Coordinating Board) in developing policy addressing articulation and transfer policy. The policy analysis examines the reasons for the policies, the policy actions taken, and the resulting policy outcomes. Using case study methodology, three basic research questions guided the investigation of articulation and transfer in Texas. The data accumulated as a result of the investigation will be presented by addressing the three research questions.

Question One

What policy actions concerning articulation and credit transfer have been developed in Texas?

To answer question one, current and past legislation addressing state articulation and credit transfer was identified. Most state agencies in Texas now have a large portion of their public access information available on Internet websites. A thorough review of the state websites found the following state agency sites that identified key legislation and Coordinating Board policy addressing articulation and transfer in Texas: Texas Legislative Council, Texas Statutes, Texas Secretary of State, Texas Higher Education

Coordinating Board, and Texas Legislature Online. Once the specific policies that addressed articulation and transfer were identified, searches of the Acts of the 70th through the 75th Legislatures, published following each legislative session, pinpointed the actual laws enacted. By comparing the new legislation with the old law, important changes were identified and will be reported in the following sections. Once the enacted laws were identified, searches of the coordinating board reports yielded the policy developed by the Coordinating Board as required by the laws. These Coordinating Board policies directed post-secondary institutions in the implementation of the articulation and transfer law. For the purpose of clarity in descriptions of the laws and coordinating board policies, two distinctions will be made. First, when the Texas Legislature enacts education legislation, the new laws generally add to or amend the Texas Education Code (2000). Thus, when reporting activities of the Texas Legislature, the policies identified will refer to sections affected in the Texas Education Code. Once legislation becomes law, the Texas Higher Education Coordinating Board, which has been given rule-making authority related to higher education by the Texas Legislature, creates the policies or “rules” that govern the implementation of the law into higher education. Those rules generally become part of the Texas Administrative Code (2000) and are designed to give more detail and clarity to the general policy set out in statutes. When reporting the activities of the Texas Higher Education Coordinating Board, the policies identified will refer to the appropriate section of the Texas Administrative Code.

Texas Education Code

Transfer Policy

In Texas, higher education is governed by a set of laws enacted through legislation debated in each house of the state's legislature. These laws are generally incorporated into the Texas Education Code (2000). Prior to 1965, the Education Code was not well organized and was difficult to understand. As a result, in the late fifties and early sixties, the Texas Legislative Council (TLC), the bill-drafting arm of the Texas Legislature, began to organize and categorize the education laws. In 1965, the TLC arranged laws affecting higher education into Title 3 of the Texas Education Code. Since that time, higher education law in Texas has been amended and added to through legislation enacted by the Texas Legislature. Currently, approximately 61 different chapters comprise Title 3 of the code (Texas Education Code, 2000).

Title 3 of the Education Code addresses a wide range of topics affecting higher education in Texas. However, even with this variety of laws, no law addressed articulation and transfer in Texas higher education until 1987. During the 70th Legislative Session, the Texas Legislature became involved with the process of facilitating transfer between institutions of higher education by enacting, on June 17, 1987, House Bill 2183 (1987). First, this bill defined core curriculum for the first time as "curriculum in the liberal arts, humanities, and sciences, and political, social, and cultural history, that all undergraduates of a particular institution of higher education are required to complete before receiving an associate or baccalaureate degree" (p. 1942). Second, House Bill 2183 allowed for the appropriation of funds to the Texas Higher Education

Coordinating Board to be used to encourage and reward institutions that achieved self-defined educational objectives consistent with the institution's core curriculum. Each institution was required to submit to the Coordinating Board a statement of the specific content, rationale, and objectives of its core curriculum. Third, the bill created an advisory committee to recommend exemplary educational objectives that could be utilized by institutions in establishing a core curriculum. Fourth, the bill required institutions to establish and report the number of semester credit hours necessary to satisfy degree requirements. House Bill 2183 was added to the Texas Education Code as section 51.305 and was effective June 17, 1987.

In 1989, the Texas Legislature enacted Senate Bill 457 (1989) of the 71st Legislature. Senate Bill 457 charged the Coordinating Board with the task of adopting policies to provide for the free transfer of lower division course credit between institutions of higher education in Texas. To publicize the procedures adopted by the Coordinating Board, each institution of higher education was instructed to publish the new, more liberal transfer procedures in the institution's course catalog.

Senate Bill 457 (1989) new law also provided for the resolution of disputes over transferred credit. Section 61.078 (c) states that if an institution does not accept transferred credit, the institution shall notify the student and the sending institution in writing that credit was denied. The law requires disputes over transferred credit to be resolved according to Coordinating Board policy by the two institutions and the student. If the dispute is not resolved or the student or sending institution is not satisfied with the resolution, the Commissioner of Education must be notified by the institution within 45

days from the original written notice of denial of credit. In the notification, the receiving institution must detail the credit denied and the reason for the denial. The commissioner, or the commissioner's designee, then makes the final determination concerning the transfer of credit and notifies the student and both institutions in writing of the final decision.

In 1997, the Texas Legislature once again addressed transfer issues and expanded the transfer ideas delineated in House Bill 2183 (1987) of the 70th Legislature and Senate Bill 457 (1989) of the 71st Legislature. Texas Legislators adopted new legislation that specified the number of credit hours in the core curriculum and set requirements for the transfer of credit between institutions of higher education. With the passage of Senate Bill 148 (1997), the 75th Texas Legislature repealed all previous legislation concerning lower-division transfer and core curriculum while establishing new guidelines for the transfer of credit between institutions of higher education. Senate Bill 148 is now part of Chapter 61 of the Texas Education Code.

This newest legislation, found in Sections 61.821 through 61.829 of the Texas Education Code (2000), provides greater detail than previous legislation for the transfer of credit between institutions of higher education in Texas. Two components of Senate Bill 148 (1997) were created to better facilitate transfer: core curriculum and field of study curriculum. Core curriculum was first defined in legislation enacted in 1987 but was modified by SB 148. Section 61.821 defines core curriculum as "the curriculum in liberal arts, humanities, and sciences and political, social, and cultural history that all undergraduate students of an institution of higher education are required to complete

before receiving an academic undergraduate degree” (Senate Bill 148, 1997, p. 3713). Senate Bill 148, with minor amendments added during the 76th Legislature in 1999 permits a student who successfully completes the core curriculum at one institution to transfer that core, as a block, to another post-secondary institution. The receiving institution must accept the transferred core curriculum block in lieu of the receiving institutions core curriculum. Not only will the student receive credit for the transferred block, but also the student is not required to take additional core curriculum courses at the receiving institution.

Despite the expanded transfer legislation, Senator Teel Bivins of Amarillo and Senator Elliot Shapleigh of El Paso raised concern during the 1997 Senate Education Committee hearings for Senate Bill 148 (1997) that the new legislation would not be as effective as needed if partially completed blocks of core curriculum were not transferable (Curricula of Certain Institutions, 1997). As a result, section 61.822 (d) of Senate Bill 148 addresses the needs of students who do not complete the core curriculum before transferring to another institution. According to this section, the receiving institution must grant credit for core courses successfully completed at the sending institution. A student who utilizes this partial transfer of core curriculum is then required to complete any additional core at the receiving institution.

Because Senate Bill 148 (1997) focused on core curriculum as the transfer mechanism, the statute directed the Coordination Board, with the help of a faculty majority advisory committee, to develop a recommended core curriculum of at least 42 semester credit hours. In order to provide some guidance to higher education institutions

Section 61.822 (b) addresses core curriculum. Each institution is required to have a core curriculum of at least 42 semester credit hours. Furthermore, the courses in the core curriculum must be consistent with the common course numbering system of the state of Texas.

Besides the core curriculum issues addressed by the Legislature in 1997, another important component of credit transfer, which falls outside the issue of the core curriculum, was addressed. Core curriculum is composed of what Senator Shapleigh refers to as the "basics" and causes minimal problems in meeting the recommendations of the Board (Curricula of Certain Institutions, 1997). However, courses required as part of a specific major have presented problems for transfer students in the past. Accordingly, during testimony before the Senate Education Committee in 1997, Senator Shapleigh emphasized the importance of providing students with the same opportunity to transfer major-specific curriculum as is provided in transferring core curriculum courses (Curricula of Certain Institutions, 1997). These major-specific courses are addressed in what is referred to as the field of study curriculum. First introduced in SB 148 (1997) of the 75th Texas Legislature, field of study curriculum establishes a core of major specific courses that are transferable as a block. Section 61.821 defines field of study curriculum as "a set of courses that will satisfy the lower division requirements for a bachelor's degree in a specific academic area at a general academic teaching institution" (Senate Bill 148, 1997, p. 3713). In other words, the field of study curriculum consists of lower-division courses in a specific field of study, such as math, English, accounting, etc., that would transfer as a block. The transferring student receives academic credit

towards the requirements for a baccalaureate degree in a specific major such as math, English, accounting, etc. in addition to any credit received for core curriculum courses.

To develop the approved field of study curriculum, the Coordinating Board, with assistance from an advisory committee composed of college and university representatives, is charged with the task of developing the requirements for courses included in the field of study curriculum (Senate Bill 148, 1997). Senate Bill 148 (1997) did not place a specific semester credit hour minimum, allowing the advisory committee to determine the appropriate number of hours for the field of study curriculum. These field of study courses are transferable as a block. Students who successfully complete the requirements for the field of study curriculum at the sending institution will receive full academic credit for the field of study curriculum at the receiving institution. The transferred block must be substituted for the receiving institution's lower division requirements for that specific degree program with the student receiving full academic credit toward the degree program. If the field of study curriculum is not completed, the student may still transfer to another institution and receive full academic credit for each course successfully completed that is included in the sending institutions field of study curriculum. However, the student may be required to successfully complete additional courses from a chosen field of study at the receiving institution. To monitor the transfer practices of all higher education institutions, Senate Bill 148 charges the Coordinating Board with developing evaluation criteria and authorizes the Board to conduct those evaluations. Details of the evaluation process will be discussed in the section on the Texas Administrative Code under Transfer Policy Rule 5.404, later in this chapter.

Articulation Policy

While the Texas Education Code (2000) has an entire subchapter dedicated to the transfer of credit between institutions of higher education, a minimal number of articulation provisions are included. In fact, articulation is only mentioned a few times in the Education Code thereby providing only minimal guidelines for the development of articulation agreements. The first reference to articulation is found in Section 61.0591 entitled Incentive and Special Initiative Funding. Specifically, Section 61.0591(c) gives the Texas Higher Education Coordinating Board a special appropriation to reward post secondary schools for achieving goals set by the Board. By developing articulation agreements, institutions are entitled to receive incentive funding. Articulation is also addressed in Section 61.851 and defines an articulation agreement as “a written commitment between the participants in a tech-prep consortium to a program designed to provide students with a nonduplicative sequence of progressive achievement leading to degrees or certificates in a tech-prep education program” (Texas Education Code, 2000, para. 1). Finally, articulation is referenced in Subchapter T, entitled Tech-Prep Education. This section requires a tech-prep consortium that is seeking grant funding to implement the tech program under an articulation agreement between the participants in the consortium (Texas Education Code, 2001, Section 61.855). Institutions of higher education may enter into these articulation agreements with other institutions of higher education, labor organizations, or businesses (Texas Education Code, 2001, Section 61.855). These sections are the only provisions in the Texas Education Code that currently address articulation.

Texas Administrative Code

Transfer Policy

Once new legislation is adopted and becomes part of the Texas Education Code (2000), Chapter 61 of the code charges the Texas Higher Education Coordinating Board with the task of creating policies or "rules" to implement the code provisions. Through a procedure detailed in chapter one of this dissertation, the rules developed by the Coordinating Board become part of the Texas Administrative Code. Rules guiding the governance of education in general are found in Chapter 19 of the Texas Administrative Code.

The rules developed by the Coordinating Board are found in Part One of Title 19 of the Texas Administrative Code (2000) with transfer rules are specifically addressed in Subchapter S of Chapter 5 in Sections 5.390- 5.405. These rules apply to academic courses and degree programs, but do not apply to technical courses or work force education degree programs. Section 5.390 of the Texas Administrative Code entitled Core Curriculum Transfer and Field of Study Curricula, requires that "all lower division academic courses shall be fully transferable among public institutions and must count toward the same degree at any public college or university in Texas" (para. 1). Section 5.400 provides definitions for the terms used in the subchapter and defines core curriculum as "the curriculum in the liberal arts, humanities, sciences, and political, social, and cultural history, that all undergraduates of an institution of higher education are required to complete before receiving a baccalaureate degree" (para. 1). Field of study curriculum is defined as "a set of courses that will satisfy the lower-division

requirements for a baccalaureate degree in a specific academic area at a general academic teaching institution" (para. 2). According to the board's rules, a lower-division course is consistent with the Texas Common Course Numbering System (TCCNS) if: the course has a TCCNS number and is listed in the Lower-Division Academic Course Guide Manual; the institution has made a request for a TCCNS number for a course and inclusion in the Lower Division Academic Course Guide Manual for the course; or if the institution has specified at least one TCCNS course listed in the Lower Division Academic Course Guide Manual that will be accepted in transfer in lieu of the course. The Lower Division Academic Course Guide Manual is an official Coordinating Board publication listing the basic core of general academic courses that are freely transferable among all public institutions of higher education in Texas in accordance with the Texas Education Code. TCCNS numbers are assigned to all courses in the manual.

In addition to defining terms used in transfer between institutions, Rule 5.391 of the Texas Administrative Code (2000) requires institutions of higher education to publish, in their course catalog, the lower division courses that are substantially equal to academic courses listed in the current edition of the Lower Division Academic Course Guide Manual. The Coordinating Board went further than the minimum 42 hours required by the Texas Education Code by allowing institutions to establish a core curriculum of no less than 42 and no more than 48 semester credit hours. Rule 5.403 provides that successfully completed core curriculum courses must be applied towards an associates or baccalaureate degree in the same way credit is awarded to non-transfer

students in that particular major and extends the same requirements to the lower division credit in any major.

Despite the need to ease transfer between institutions, Rule 5.391(d) of the Texas Administrative Code (2000) provides that no institution is required to accept more credit than is outlined in the applicable Coordinating Board approved transfer curriculum for that major. Furthermore, in the absence of Coordinating Board approved transfer curriculum, institutions are not required to accept in transfer more lower-division credit for the major than the institution allows for non-transfer students in that major and are not required to accept a grade of "D" as transfer. In addition, the rules limit the number of transfer hours an institution must accept from a community college to 66, but allows a school to accept additional credit hours if desired. Finally, Rule 5.391(e) compels institutions to provide equivalent access to support services for transfer students and non-transfer students alike. If an institution requires a student to retake a course that is substantially equivalent to a course already taken at another institution, Rule 5.392 punishes the receiving institution by having that institution's formula funding for credit hours in the repeated course deducted from the institutions appropriations.

Unfortunately, disputes arise over transfer credit. To provide an avenue for students to appeal the denial of transfer credit, the Texas Higher Education Coordinating Board developed a process for the resolution of transfer disputes for lower-division courses in Rule 5.393 of the Texas Administrative Code (2000). If a college or university does not accept course credit earned at another institution, the receiving institution must notify the student and the sending institution that credit has been denied.

The student may dispute the denial of credit through the sending institution or the receiving institution and work with both institutions to attempt to resolve the transfer of course credit in accordance with board rules and guidelines. If the dispute is not settled within 45 days of receipt of the official notice of denial, the institution denying credit must notify the Commissioner of Education of reasons for denial. The Commissioner or designee will make the final decision concerning the transferability of course credit and provide written notification of the final decision to the student and institutions involved. The Board is required to collect data on the types of transfer disputes and the disposition of each case considered by the Commissioner or designee.

The foundation for the newest transfer rule is based on the core curriculum. Texas Administrative Code (2000) Rule 5.402 provides that each academic institution and community college is required to design and implement a core curriculum of not less than 42 lower-division semester credit hours. Later, in Rule 5.403, institutions may adopt a core curriculum of more than 42 semester credit hours but no more than 48 semester credit hours. Rule 5.402 continues by providing that the core curriculum must be designed around exemplary educational objectives, consistent with the Texas Common Course Numbering System, and consistent with the minimum number of semester credit hours required in each of five major component areas. The five component areas are communication, mathematics, natural sciences, humanities and visual and performing arts, and social and behavioral sciences (Table 4.1). Additionally, the core curriculum must follow the options available to institutions for the remaining semester credit hours (Table 4.2). Institutions were required to honor student transfer of core courses and core

curricula beginning in fall 1998 and have the core curriculum requirement implemented by fall 1999. The 42 credit hour core curriculum can be transferred and accepted as a block to any other higher education institution in the state and will replace the core curriculum at the receiving institution. The student is not required to take further core curriculum courses at the receiving institution. The only exception applies if the Board has approved a larger core curriculum at the receiving institution. If a student is concurrently enrolled at more than one institution of higher education, the student must follow the core requirements at the institution at which the student is classified as a degree-seeking student.

Because all students do not complete the sending institutions core curriculum before they transfer and to make transfer of credit as uniform as possible, the subject of partial transfer was addressed in the Texas Education Code (2000) and the Texas Administrative Code (2001). Rule 5.402 provides that students not completing the core curriculum block at the sending institution will still receive credit for core curriculum courses that are successfully completed. The receiving institution will give credit for equivalent courses in the core curriculum of the receiving institution. The student is required to complete the remaining course requirements in the core curriculum at the receiving institution and must still meet the minimum number of semester credit hours for each component. However, receiving institutions are not required to accept more than the maximum component core course semester credit hours for the core component area. Each institution is required to publish and make readily available to students the core

curriculum requirements stated in terms consistent with the Texas Common Course Numbering System.

The Coordinating Board developed a table (Table 4.1) for institutions to use in creating core curriculum. Institutions must select 36 semester credit hours of the core curriculum according to the parameters described in the table.

Table 4.1
Core Curriculum Chart

Component Area	Required Semester Credit Hours
Communication (English rhetoric/composition)	6
Mathematics (logic, college-level algebra equivalent, or above)	3
Natural Sciences	6
Humanities & Visual and Performing Arts	6
Must include:	(3)
Visual/Performing Arts	(3)
Other (literature, philosophy, modern or classical language/ literature and cultural studies*)	
Social and Behavioral Sciences	15
Must include:	
U.S. History (legislatively mandated)	(6)
Political Science (legislatively mandated)	(6)
Social/Behavioral Science	(3)
Total Minimum Requirements	36

***Humanities** application of language skills includes a study of literature in the original language, and/or the cultural studies related to a modern or classical language.

Institutions must then use Table 4.2 to select an additional 6 semester hours from one or more of the component areas to complete the required 42-semester credit hour core curriculum.

Table 4.2
Remaining Components
of the Core Curriculum

Component Area	Possible Additional Semester Credit Hours (6 Total)
Communication (composition, speech, modern language, communication skills*)	Up to 6
Mathematics (finite math, statistics, calculus, or above)	Up to 3
Natural Sciences	Up to 3
Humanities & Visual and Performing Arts (literature, philosophy, modern or classical language/literature and cultural studies**)	Up to 3
Social and Behavioral Sciences	Up to 3
Institutionally Designated Option (may include additional semester credit hours in the categories listed above, computer literacy, health/wellness, kinesiology, capstone or interdisciplinary courses, etc.	Up to 3
Total Additional Hours	6

* **Communication** application of a modern language means the basic proficiency skills acquired during introductory courses and including a working competency in grammar, writing, speaking, and listening/comprehension in a foreign language.

** **Humanities** application of language skills includes a study of literature in the original language, and/or the cultural studies related to a modern or classical language. (Texas Administrative Code, §5.402, 2001)

The Texas Administrative Code (2000), Rule 5.403, allows an institution to adopt a core curriculum of more than 42 semester hours, but no more than 48 semester credit hours, only if the additional courses above the 42 semester credit hours are chosen from the first five component areas of Chart II of Rule 5.402 and approved by the institution's governing board. If the components are selected from component areas other than the first five component areas listed in Chart II of Section 5.402, the core curricula larger than 42 semester credit hours will not be approved.

In Rule 5.404 of the Texas Administrative Code (2000), the Coordinating Board sets the criteria for evaluation of the institutions core curricula. First, the policy states that each institution must "review and evaluate its core curriculum at intervals specified by the Board and shall report the results of that review to the board" (Texas Administrative Code, 2000, para. a). The evaluation will include the extent to which the:

1. curriculum is consistent with the elements of the core curriculum recommended by the Board;
2. curriculum is consistent with the Texas Common Course Numbering System;
3. curriculum is consistent with the elements of the core curriculum component areas, intellectual competencies, and perspectives as expressed in "Core Curriculum: Assumptions and Defining Characteristics" adopted by the Board; and
4. Institution's educational goals and the exemplary educational objectives of the core curriculum recommended by the Board are being achieved. (Texas Administrative Code, 2001, para. a)

Each institution must report the findings described above to the Coordinating Board.

This evaluation report must contain the following:

1. a table that compares the institution's core curriculum with the core component areas and exemplary educational objectives of the core curriculum recommended by the Board;
2. a brief description of the purpose and substance of the institution's core curriculum;
3. a description of the processes and procedures used to evaluate the institution's core curriculum; and
4. a description of the ways in which the evaluation results are utilized to improve the core curriculum at the institution. (Texas Administrative Code, 2001, para. a)

Institutions are not required to report core curriculum evaluations until 2004.

In addition to provisions for a transferable core curriculum, the current Texas Administrative Code details the Coordinating Board's policy for field of study curriculum

in Texas Administrative Code (2000) Rule 5.405. This rule requires successfully completed field of study curriculum at one institution to transfer as a block to the receiving institution and to substitute for the receiving institutions lower-division requirements for the similar degree program. Students transferring field of study blocks shall receive full academic credit in the specified major. If a student has not completed the field of study curriculum block from the sending institution, the student will still receive full credit for the successfully completed courses taken at the sending institution. The transferred courses will be substituted for courses in the receiving institutions field of study curriculum. However, the student may be required to complete the remaining requirements in the field of study curricula at the receiving institution. A student concurrently enrolled at multiple institutions will follow the field of study curriculum requirements at the institution that classifies the student as degree seeking.

Title 19, Part 1, Chapter 9

One component of the Texas Administrative Code (2000) designed to encourage institutions to follow transfer policies is the control of funding for transfer courses. Title 19, Part 1, Chapter 9, Subchapter D, details the rules and procedures for the approval and continuation of academic courses for public community/junior or technical colleges eligible for state appropriations. Rule 9.73 mandates that courses must either be listed in the Academic Course Guide Manual, be reviewed and approved by the Coordinating

Board, or be consistent with the Texas Common Course Numbering System to receive funding. The Coordinating Board must approve special courses, referred to as unique need courses, before state appropriations may be used to fund those courses. To receive approval from the Coordinating Board for funding as a unique needs course, Rule 9.74 requires the course to: be acceptable for transfer; apply toward a Baccalaureate degree; satisfy general academic, major, or elective requirements at a minimal of two regional universities; have college-level rigor. As courses develop and change over the years, those changes must be reflected in the Academic Course Guide Manual. Accordingly Rule 9.73 creates a standing advisory committee, composed of representatives from public community and junior colleges and other appropriate public institutions. The committee is required to meet annually and make recommendations to the Coordinating Board concerning changes to the Academic Course Guide Manual.

Articulation Policy

Similar to the limited amount of information available in the Texas Education Code (2000) concerning articulation, the Coordinating Board's policies reflected in the Texas Administrative Code (2000) contains minimal references to articulation. Rule 5.246(f)(2) requires university systems to "develop articulation agreements and partnerships with local community and technical colleges and other universities" (para. f-2). Articulation plays a part in workforce education as well. Rule 9.121 states its

purpose as the provision of rules and regulations that enable public community/junior colleges and technical colleges to enter into contractual agreements with other institutions of higher education or non-SACS/COC-accredited organizations to improve the articulation, quality, and efficiency of educational programs and services. However, the remaining provisions in Subchapter G have limited applicability to credit classes. Section 9.123 provides that contact hours reported for workforce education courses that result in either credit hours or CEUs are eligible for formula funding. In addition, if a course or program meets or exceeds 780 hours in length, appropriate credit hours must be awarded and be applicable to a certificate and an applied associate degree program. Finally, student enrollments for semester/quarter hour credit are subject to the provisions of the Texas Academic Skills Program, as applicable. The rest of the section deals with the creation of courses and the writing of contractual agreements between two organizations.

Besides the rules that apply to public institutions with respect to articulation, proprietary schools must also address articulation. Texas Administrative Code (2000) Rule 12.31 states that "a proprietary institution holding a Certificate of Authority to grant the associate degree shall publish in a prominent place in the institution's catalog complete and clearly stated information about the transferability of credit to other postsecondary institutions including community and technical colleges and four-year institutions" (para. 1). The sections listed above are the only guidelines the Texas Administrative Code gives related to articulation.

Through the legislation enacted by the Texas Legislature and rules adopted by the Coordinating Board, the state of Texas has taken several policy actions to address

articulation and transfer within the state. Analyzing the reasons behind the legislation and the rules leads to the second research question.

Question Two

What factors led the state of Texas to adopt articulation and transfer credit policies?

Once policy actions were identified, committee reports and public hearing transcripts of the Texas Senate and the Texas House of Representatives were reviewed to determine the underlying motivation for the articulation and transfer policies in Texas. Using the Texas Legislature Online, the dates and times of the meetings of the House Higher Education Committee and Senate Education Committee that addressed articulation and transfer were identified. Every meeting of the respective committees is recorded and archived. Copies of the audiotapes from the committee hearings were obtained from the Senate Staff Services and the House Communication Division. These audiotapes were reviewed for references to the reasons for articulation and transfer policies in Texas.

Reasons for Articulation and Transfer

As detailed in Chapter 1, a number of studies have examined the reasons states are creating statewide articulation and transfer policies. Many of the reasons cited in those studies were also determinative factors that lead to the development of transfer and articulation policies in Texas. The key piece of legislation that brought about substantial changes to the articulation and transfer mechanisms in Texas was Senate Bill 148 (1997)

of the 75th Legislature, Regular Session. When this legislation was considered, congressional committees held public hearings to discuss the purpose of the bill and its resulting impact. Reasons were expressed that substantiate the need for statewide articulation and transfer policies in Texas. These hearings provide insight into why articulation and transfer were deemed important by the state Legislature.

Senate Education Committee

On February 5, 1997 the Senate Education Committee held public testimony concerning Senate Bill 148 (1997) to discuss Curricula of Certain Institutions (1997). Chairman of the Senate Education Committee Senator Teel Bivins, in his testimony as the author of the bill, cited a variety of reasons for the new legislation. Senator Bivins has specific interest in transfer legislation because Amarillo Community College is in his district. Thus as an advocate of community college transfer, Senator Bivins emphasized the difficulty many students encounter transferring the maximum hours of credit from one institution to another. According to Curricula of Certain Institutions (1997), he stressed that society today is becoming increasingly mobile and students are moving all over the state of Texas. With this increased mobility, the number of transfer students has grown considerably. Bivins stated that in 1997 some 75,000 community college transfer-students were in four-year institutions. By 2010 he projected there would be a substantial increase in postsecondary enrollment. Furthermore, Bivins estimated that two-thirds of that enrollment increase would be a direct result of transfer students. In addition, Bivins stated that 50% of students attending higher education institutions were in community

colleges. Bivins lamented the difficulty those students encounter when attempting to efficiently move through the system, matriculate, and earn a degree. Senator Bivins recounted that the Legislature in 1987 required each institution to develop a core curriculum as recommended by a core curriculum advisory committee. Bivins added that developing a core curriculum was a good first step, but it did not fix the problem. Consequently, Bivins stressed it was time for the Texas Legislature to take the next logical step, by ensuring each Texas public institution has a core curriculum that is recognized and transferable to other Texas institutions. His concern was for the many students who transfer and lose credit for courses taken at the sending institution.

After discussing the history of articulation in the state and predicting what the future might hold, according to Curricula of Certain Institutions (1997), Bivins stated three key reasons for ensuring that core courses are transferred. First, transferred core courses will prevent a student from having to retake the course, which lengthens the time to degree. Second, Bivins pointed out that duplicated courses force the student or the student's parents to pay additional tuition and fees. Finally, Bivins stated the most significant and troubling problem for the state is that because a student's tuition only covers 18 % of the cost of offering a particular course, the taxpayers of this state are forced to subsidize the duplication. With higher education institutions seeking increased state funding, Bivins concluded that higher education does not have "clean hands" when asking for more money with inefficiencies in the system that cause inefficient expenditures. Bivins also noted that in the long term, new transfer policies would potentially save the state a considerable amount of money.

According to Curricula of Certain Institutions (1997), further testimony before the Senate Education Committee supported Senator Bivins claims. Don Brown, acting commissioner of the Texas Higher Education Coordinating Board, was called on to clarify a couple of points. First, discussion between Senators Bivins, Shapleigh, and Royce West of Dallas addressed concerns on the need to give credit for partial completion of a field of study curriculum. Commissioner Brown stated that he had not addressed this issue with the universities and did not know how they would respond to a law that would require them to accept every course that might partially satisfy the field of study requirement. He stated that if there is a requirement for universities to accept partial completion of the core curriculum, a similar requirement could also apply to the field of study curriculum. Brown stated the Coordinating Board was beginning the process of bringing together advisory committee representatives from universities and community colleges in specific fields to reach agreement on a set of courses to constitute a field of study curriculum. If that process succeeds a transferable field of study curriculum would be standardized. Therefore, Dr. Brown believed that students should be able to easily receive credit for course in the approved field of study curriculum.

Public testimony during the committee hearing began with Dennis Michaelis, president of McLennan Community College (Curricula of Certain Institutions, 1997). Dr. Michaelis testified in favor of Senate Bill 148 because it created a method that allows students to transfer from community colleges to universities without having to re-take courses. Michaelis projected that by 2010, some 131,000 more students will be in higher education and 56 % of those students will be enrolled in community colleges. He added

that in 1996, over 44,000 students transferred from one institution to another and two-thirds of those students, about 29,000, transferred from community colleges. Michaelis pointed out that if the state does not dramatically increase the number of students who reach degree completion, the state's economy would suffer. Michaelis stated that according to the fiscal note, which measures the fiscal impact of legislation, the bill will save the state of Texas at least 20 million dollars each year by reducing the number of duplicated courses the state would have otherwise funded. Senator Bivins pointed out that according to calculations from the comptroller's office the real impact of the legislation will not be seen until the 2000 and 2002 bienniums (Curricula of Certain Institutions, 1997).

Further public testimony was given before the Senate Education Committee. According to Curricula of Certain Institutions (1997), Dr. Cheryl Sparks, president of Howard College in Big Springs Texas presented public testimony. Representing Howard College and the Texas Association of Community Colleges, Dr. Sparks stated that she concurred with Dr. Michaelis and supported the proposed bill. She stated that higher education should reduce the hassle students have to face. Policies easing the difficulties of transferring credit are necessary to reduce that hassle. Senator Tony Fraser of Horseshoe Bay asked Dr. Sparks if the community college system kept any records on the percentage of transfer courses that are not being accepted by universities. Dr. Sparks did not know the answer to Senator Fraser's question. However, Ray Garcia, the executive director of the Texas Association of Community Colleges, responded by stating that the data is not collected on a state-wide basis, but individual institutions track

rejected transfer courses. Citing a study by the American Council on Education, Dr. Garcia stated that on average a student loses 3 semester hours when transferring from a community college to a four year institution.

Dr. William Cunningham, Chancellor of the University of Texas System, also spoke in favor of the proposed legislation and agreed with the idea of the field of study curriculum as well (Curricula of Certain Institutions, 1997). Dr. Cunningham said that no legislation would solve all the problems, but this bill would solve the problem of transfer and transferability of students from junior colleges in this state into four-year institutions and the UT system. Dr. Cunningham believed that through the University of Texas' Back to Basics Project and by working with junior colleges, the system had solved the vast majority of transfer problems. He believes that the vast majority of unsolved problems can be attributed to the fact that students do not ask for or obtain counseling services at either the junior college or four-year institution. When asked by Senator Fraser about specific data addressing the amount of credit lost due to transfer, Dr. Cunningham stated that the UT system was about as low as they can go. He reiterated that when students are transferring 45 to 60 hours and only three hours are lost, he felt that the problems students face when transferring courses are just about as insignificant as feasible. Dr. Cunningham summed up by pointing out that with the University of Texas System's articulation agreements and commitments coupled with the commitments of junior colleges, especially factoring in the fact that students change majors, he just did not believe that transfer problems could be reduced to a much greater degree.

The public testimony in Curricula of Certain Institutions (1997) also included Scott Nelson, faculty member at Kingwood College in the Montgomery Community College District, who was present to represent the Texas Community College Teacher's Association. He stated that he was in favor of the proposed legislation and would only wish to add that there was a need to ratchet up the core curriculum from 42 to 60 semester credit hours. He did not explain the reasons for the increase and was not questioned by any of the committee.

Dr. Dan Angel, president of Stephen F. Austin State University testified in favor of SB 148 as well (Curricula in Certain Institutions, 1997). Dr. Angel praised previous reforms to the state's transfer and articulation policy, but said that the guarantee of core transfer and block of credit major transfer included in the new legislation will go along way towards appeasing numerous frustrated students and parents. Dr. Angel, also, emphasized the importance of the projected state savings of 20 million dollars after 2000 and the projected 4 million dollar savings to students and parents. Dr. Angel finished his testimony by once again emphasizing that the transfer guarantees written into this legislation will help ensure institutions handle transfer more effectively.

Charles Lee, Vice chancellor of the Texas A&M University System, added to the public testimony in Curricula of Certain Institutions (1997) by emphasizing the importance of a bill that would create smooth articulation procedures for students who wish to begin their baccalaureate education at a community college. Increasing the number of students transferring from community colleges to four-year institutions will help to meet the goals stated in A&M's Back to Basics Documents. Dr. Lee believes that

the bill will help improve the flow of students who receive an associate degree from a community college to four-year institutions and will guard against unnecessary cost to the student and the state. Dr. Lee finished by stating that the A&M system is very positive about the importance of articulation in ensuring that the population of this state is prepared for the challenges of the next century. After some technical discussion concerning the nuts and bolts of the bill, testimony was closed. The bill was then sent from the Senate Education Committee to the full Senate with a favorable committee recommendation. Senate Bill 148 was passed by the Senate.

House Committee on Higher Education

On March 11, 1997, the House Committee on Higher Education met to discuss the merits of SB 148 (1997). Representative Irma Rangel of Kingsville explained the bill and called witnesses for public testimony. According to Curricula of Certain Institutions (1997), Dr. Ray Garcia, executive director of the Texas Association of Community Colleges, lead the discussion by stating that the association endorsed the bill for two reasons. First, the association believes the bill is good public policy. Dr. Garcia expressed the view that the state needs to do everything possible to allow students to transfer without losing credit hours. The association believes that with the projected increase in students attending higher education and with two-thirds of those students beginning their start at a community college, a good system must be in place that allows those students to transfer. The second reason the association supports the bill is that it is

good fiscal policy. The association believes that in the long run the state, students, and parents will save money by not paying for duplicate courses.

Dr. Robert Goad, president of the Texas Conference of the American Association of University Professors (AAUP) and a math professor at Sam Houston State University, presented the only negative comments before the House Committee on Higher Education concerning the proposed legislation (Curricula of Certain Institutions, 1997). Dr. Goad stated that while the AAUP supports the concept behind the bill and feels there is a need to use the states resources wisely and not to duplicate services already provided, the strict standardization provided by the field of study curriculum would restrict creativity in major specific courses at the university level. Dr. Goad stated that having a state mandated curriculum means that innovation would have to occur at the state level and would result in a chilling effect on curricular innovation. In addition, Dr. Goad expressed concern that courses in the field of study curriculum of one institution may not be on the same level as the receiving institution's courses. He expressed that this discrepancy would cause a student to be unprepared when transferring to the four-year institution. Dr. Goad also expressed concern over the transfer of the core curriculum as a block. Without coordination of core content, the value of the receiving institutions degree program could become questioned and articulation problems could occur.

Dr. Ray Garcia was recalled by the committee chair for his thoughts on the concerns expressed by Dr. Goad (Curricula of Certain Institutions, 1997). Dr. Garcia started by refuting Dr. Goad's concerns on transferring the core curriculum block by pointing out that the bill requires the Texas Higher Education Coordinating Board to set

general guidelines for establishing a core curriculum and gives each institution the freedom to select from the Coordinating Board guidelines which 42 hours to use. Therefore, Dr. Garcia believes the articulation concerns expressed by Dr. Goad would be addressed appropriately. In reference to the field of study curriculum, Dr. Garcia stated that the Coordinating Board would set uniform curriculum requirements for all lower division courses so that no matter where the student transfers the field of study curriculum will have prepared the student for the next level. As far as innovation, Dr. Garcia pointed out that the bill provides for an advisory committee composed primarily of faculty members to set the requirements of the field of study curriculum and would review the requirements on a regular basis. The faculty members would at that point be able to address changes needed in the field of study. Dr. Garcia ended by reemphasizing the legitimate state interest in making sure students are not penalized when transferring from one institution to another.

After Dr. Garcia's statements, Dr. Goad withdrew his objection to the block transfer of core curriculum because he had overlooked the portion of the bill that addressed the coordinating board's guidance in the development of core curriculum (Curricula of Certain Institutions, 1997). Dr. Goad still raised an objection to the idea that innovation would have to take place at the state level. After some additional discussion concerning the technical aspects of the bill, the Committee approved the bill and recommended that the full House pass the bill. The House passed SB 148 (1997).

Thus, the Senate Education Committee hearings and the House Higher Education Committee hearings provide insight into the reasons the state of Texas adopted articulation and transfer policies.

Question Three

After policy actions were initiated, what were the resulting outcomes?

To answer question three, statistical information was gathered from the Texas Higher Education Coordinating Board. The Texas Higher Education Coordinating Board is charged with making reports to the Legislature concerning a variety of higher education topics. As described in Chapter III, this dissertation was initially designed to examine transfer rates. However, on investigation of the laws enacted by the Legislature and the resulting policies crafted by the Coordinating Board, additional reports were identified that would reflect the outcomes of articulation and transfer policy. Consequently, the answer to question three will be divided into two sections, transfer rates and other outcomes.

Transfer Rates

To determine transfer rates, the Coordinating Board tracks students in cohorts to determine their transfer patterns and persistence tendencies. In 1994, the Texas Higher Education Coordinating Board and the Texas Association of Junior and Community College Instructional Administrators created the Transfer Success Work Group to

examine the effectiveness of transfer in Texas and to examine transfer outcomes for Texas public two-year colleges (Timmer, 1995). The work group study is important to this dissertation in two ways. First, in 1987 and 1989, new transfer legislation was adopted in Texas designed to ease the difficulties experienced by transfer students. The Transfer Success Work Group study specifically examined the function of transfer in Texas and reported on the transfer data from 1990 to 1994, thus recording the first effects of the legislation designed to ease transfer burdens. In 1997, after the Transfer Success Work Group study was conducted, new legislation repealed the 1987 and 1989 laws thus creating new policies to increase student transfer in Texas. Examining the findings of this report and comparing the results to current transfer measures can provide insight into the true effectiveness of the 1997 transfer legislation. In addition, the outcomes identified in the work group study were the basis for the outcome categories established in chapter three of this dissertation.

According to Timmer (1995), the work group examined longitudinal student transfer data at several levels and established transfer rates for Texas two-year colleges using data readily available from the Texas Higher Education Coordinating Board. The work group included only students who had attempted at least 15 hours of college work and who had attended their initial community college for at least two semesters. Students who transferred to private or out-of-state senior institutions could not be counted. Consequently, the study only examined students who transferred to public senior institutions in the state of Texas.

In the original work group study, data was gathered from the Integrated Post-secondary Educational Data System (IPEDS) defining the cohort as:

- students enrolling summer 1990 as first-time college students who attended the same community college fall 1990;
- students who enrolled fall 1990 as first-time in college students; and
- students still enrolled during fiscal year 1994 (fall 1993 or spring 1994) at the community college would be reported separately.
(Timmer, 1995, p. 10)

Subsequently, this dissertation will use the same definitions from the 1990-1994 cohort to identify a cohort of students from 1996-2000. In addition, to determine the level of persistence for transfer students in four-year institutions, persistence rates were calculated for transfer students who enrolled for at least two semesters in the four-year institution (Timmer, 1995). The next two sections will analyze the data for the 1996-2000 cohort and then compare the data from the 1990-1994 cohort to the 1996-2000 cohort.

1996-2000 Cohort

For the 1996-2000 cohort, the statewide data was broken down by student major alone and then grouped the type of major with gender, ethnicity, and age. Using the same table structure as the work group tables, the latest data available was inserted in the tables below. Each report uses the following categories to calculate statewide transfer rates and will resemble the tables used in Chapter I.

- First Time in College: Integrated Postsecondary Education Data System (IPEDS) fall 1996 students as described in each table.
- # With 15 Hrs. 2 Sem: Focus sub-population: those students attempting at least 15 credit hours and enrolling at the same community college for two or more semesters.

- # Enr in CTC FY 00: The number of students from column 2 still enrolled in a community or technical college during fall 1999 or spring 2000.
- % Enr in CTC FY 00: The number of students from column 2 still enrolled in a community or technical college during fall 1999 or spring 2000.
- Cohort minus # Enr: The difference between columns 2 and 3 (students attempting at least 15 hours during at least two semesters at the same community college who were not enrolled in a community college during fall 1999 or spring 2000).
- Trans to Sr. Inst: The number of students from column 5 (Cohort minus # Enr) who transferred to a public senior institution in Texas.
- Trans Rate %: The percent of students from column 5 who transferred to a public senior institution in Texas.
- Trans or Still Enr %: The percent of students who transferred to a public senior institution in Texas or where enrolled at a public community or technical college in Texas during fall 1999 or spring 2000.
- % Persist: The percent of the students who transferred to a public senior institution in Texas who enrolled at that senior institution for two or more semesters. (based on Timmer, 1995)

According to the data from the 1996-2000 (see Table 4.3) cohort, just under a third of the students from fall 1996 were still enrolled in a community college four years later. This fact demonstrates that many students are taking more than the two years traditionally perceived as necessary to complete community college work. If students were taking longer at community colleges, it would stand to reason that their time to degree would be extended as well. Future studies might examine the question of whether extended length of time before transfer is contingent on whether the student attends college full-time or part-time. If the student attends part time, more research could be conducted to determine why the student attends only part-time.

Table 4.3
Transfer of Students by Type Major

Statewide Totals First-Time-In-College Freshman Summer/fall 1996 Cohort through Spring 2000									
Type Major	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '00	% Enr in CTC FY '00	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
Academic	57,850	38,648	12,591	32.6	26,057	9,012	34.6	55.9	87.3
Technical	22,908	14,728	4,222	28.7	10,506	1,416	13.5	38.3	85.6
TechPrep	9,345	6,363	1,986	31.2	4,377	624	14.3	41.0	81.4
Total	90,103	59,739	18,799	31.5	40,940	11,052	27.0	50.0	86.8

The TechPrep category was changed from undeclared major to Tech Prep.

Source: Texas Higher Education Coordination Board (2000)

Interestingly, 34.6% of the cohort students with an academic major, not still enrolled in a public two-year institution, have transferred to a senior institution. In contrast, only 13.5% of students with a technical major and 14.3% of students with a Tech-prep major, not still in enrolled in a public two-year institution, have transferred to a senior institution. Clearly, this variable is a strong predictor of transfer behavior. Future studies might examine the reasons for the low rate of transfer for the technical and tech-prep students. Fortunately, half of all students in the cohort were still enrolled in some form of public higher education in Texas with over 55% of the academic majors still enrolled. For the students that did transfer during 1996-2000, 86.8% enrolled at those senior institutions for more than one semester. A source for further study could be to examine if those from these cohorts that transferred actually matriculated and their average their time to degree.

While Table 4.3 calculated data for all transfer students, Tables 4.4 – 4.6 calculate data for only those students with academic majors. Table 4.4 contains transfer rates for first-time-in-college students in summer/fall 1996 through spring 2000 by gender.

Table 4.4
Transfer of Students by Gender

Statewide Totals First-Time-In-College Freshman Summer/fall 1996 Cohort through Spring 2000 Academic Students									
Gender	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '00	% Enr in CTC FY '00	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
Female	31,803	21,722	7,332	33.8	14,390	5,053	35.1	57.0	87.7
Male	26,047	16,926	5,259	31.1	11,667	3,959	33.9	54.5	86.8
TOTAL	57,850	38,648	12,591	32.6	26,057	9,012	34.6	55.9	87.3

Source: Texas Higher Education Coordination Board (2000)

Table 4.4 indicates that of the academic cohort identified, female students remained enrolled in two-year institutions at a higher rate than males and transferred to senior institutions at a higher rate than males as well. In addition, female students persisted at a higher rate as well. In fact, during the cohort years, female students composed a larger population of first-time-in-college freshman than did their male counterparts by 5,756 students.

Table 4.5
Transfer of Students by Ethnicity

Statewide Totals First-Time-In-College Freshman Summer/fall 1996 Cohort through Spring 2000 Academic Students									
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Ethnicity	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '00	% Enr in CTC FY '00	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
White	35,001	22,802	6,851	30.0	15,951	6,395	40.1	58.1	88.4
African- American	4,760	3,078	858	27.9	2,220	495	22.3	44.0	88.5
Hispanic	15,397	10,873	4,180	38.4	6,693	1,646	24.6	53.6	82.1
Asian- American	1,982	1,412	554	39.2	858	376	43.8	65.9	89.6
Native American	287	175	48	27.4	127	36	28.3	48.0	86.1
International	423	308	100	32.5	208	64	30.8	53.2	90.6
TOTAL	57,850	38,648	12,591	32.6	26,057	9,012	34.6	55.9	87.3

Source: Texas Higher Education Coordination Board (2000)

Table 4.5 contains the transfer rates for first-time-in-college students in summer/fall 1996 through spring 2000 by ethnicity. This table indicates that in the cohort of academic students identified the ethnic groups comprised the following percentages: whites, 60.5%; African-Americans, 8.2%; Hispanics, 26.7%; Asian-Americans, 3.4%; Native Americans, 0.5%; and International students, 0.7%. Of the students who transferred, Asian Americans had the highest transfer rate with 43.8% and whites were next with 40.1%. Even though Asian Americans transferred at the highest rate of any ethnic group, a higher percentage of Asian-American students remained at two-year institutions after four years as well. Further study could focus on the reasons for this trend. In addition, a high percentage of Hispanic students remained at the two-year institution at the end of four years as well. One key difference is the persistence rate of Hispanic students. With a persistence rate of 82.1%, fewer Hispanic students remained at the senior institutions for at least two semesters than any other ethnic group.

Table 4.6
Transfer of Students by Age Group

Statewide Totals First-Time-In-College Freshman Summer/fall 1996 Cohort through Spring 2000 Academic Students									
Age Group	First Time in College	# with 15 hrs. 2nd Sem.	# Enr in CTC FY '00	% Enr in CTC FY '00	Cohort Minus # Enr	Trans to Sr. Inst.	Trans. Rate %	Trans or Still Enr %	% Persist
<17	2,468	1,193	384	32.2	809	507	62.7	74.7	91.1
17-19	39,918	29,142	9,572	32.8	19,570	7,600	38.8	58.9	87.7
20-24	7,932	4,721	1,495	31.7	3,226	601	18.6	44.4	83.5
25-29	2,774	1,452	445	30.6	1,007	151	15.0	41.0	79.5
30-39	3,049	1,468	495	33.7	973	10.3	10.6	40.7	83.5
40-49	1,243	518	144	27.8	374	46	12.3	36.7	71.7
50-59	339	118	43	36.4	75	2	2.7	38.1	100.0
60-69	72	19	6	31.6	13	1	7.7	36.8	100.0
70 & up	55	17	7	41.2	10	1	10.0	47.1	0.0
TOTAL	57,850	38,648	12,591	32.6	26,057	9,012	34.6	55.9	87.3

Source: Texas Higher Education Coordination Board (2000)

Table 4.6 shows that the majority of academic students fell into the 17-19 and 20-24 age group. Eliminating the <17 age group, the 17-19 age group had the highest transfer rate and the highest number of first-time-in-college students than the other groups. 69% of all first-time-in-college students from the 1996-2000 cohort fall in the 17-19 age group. If we include the 20-24 age group in the calculation, 82.7% of students fall into that category. In addition, excluding the combined three transfer students from the 50-59 and 60-69 age group, the <17 and 17-19 age groups have the highest persistence rate. One conclusion that can be drawn from the data is that more than two-thirds of the students in the cohort that are under 17 transferred with 91.1% of those persisting.

Comparison of Cohorts

The two cohorts were compared in this dissertation to determine the changes over time in transfer rates. The first cohort, tracked from 1990-1994, was studied prior to the adoption of current transfer policies. The second and most recent cohort, tracked students from 1996-2000, reflects the transfer activities of students after (except for 1996) the current policies were adopted. Comparison of transfer and persistence rates from the 1990-94 cohort and the 1996-2000 cohort shed some insight into the effectiveness of transfer policy in Texas. In the following tables, the number of students that transferred to a senior institution, transfer rates, and persistence rates for both of the transfer cohorts are compared. Full tables of all transfer data from these two cohorts can be found in the appendices.

Complete comparisons cannot be made on Table 4.3 because the data for tech prep majors was not calculated for the 1990-1994 cohort. However, a few points are evident. First, in the 1990-94 cohort, 5719 students with academic majors transferred to senior institutions yielding a 31.8% transfer rate. In the 1996-2000 cohort, 9012 students with academic majors transferred to senior institutions yielding a 34.6% transfer rate. Not only did the 1996-2000 cohort have a higher transfer rate, but 3,293 more students transferred as well. In addition, students with technical majors transferred at a higher rate from the 1996-2000 cohort than they did from the 1990-94 cohort. Considering 1416 technical students (13.5%) transferred from 1996-2000 and only 1064 technical students (11.3%) transferred from 1990-1994, transfer policies appear more effective.

Table 4.7
Comparison of Transfer by Type Major

Type Major	Statewide Totals								
	First-Time-In-College Freshman								
	Comparison of Rate of Transfer and Persistence of Students								
	96-00 Trans to Sr. Inst.	90-94 Trans to Sr. Inst.	Diff	96-00 Trans. Rate %	90-94 Trans Rate %	Diff	96-00 % Persis t	90-94 % Persis t	Diff
Academic	9,012	5,719	3293	34.6	31.8	2.8	87.3	85.8	1.5
Technical	1,416	1,064	352	13.5	11.3	2.2	85.6	81.6	4.0
TechPrep	624	Unkn	Unkn	14.3	Unkn	Unkn	81.4	Unkn	Unkn
Total	11,052	8,812	Unkn	27.0	25.3	Unkn	86.8	84.9	Unkn

The TechPrep category is different from the original study. Subsequent reports changed the reporting category by deleting undeclared major and adding Tech Prep information. Source: Texas Higher Education Coordination Board (1995,2000)

Tables 4.8-4.10 compare calculations for students with academic majors. Table 4.8 compares transfer rates for first-time-in-college students from the 1990-1994 cohort to the 1996-2000 cohort by gender.

Transfer and persistence rates separated by gender provide an interesting perspective. First, both genders from the 1996-2000 cohort transferred at a higher rate than the 1990-1994 cohort. In the 1996-2000 cohort, 5,053 (35.1%) female students transferred which is more than the 2,968 (30.5%) who transferred in the 1990-94 cohort. From the 1996-2000 cohort, 3,959 (33.9%) men transferred as compared to 2,751 (33.3%) from the 1990-94 cohort. However, the gender roles have reversed from one cohort to the next. In the 1990-1994 cohort, males (33.3%) transferred at a higher rate than the females (30.5%). However, in the 1996-2000 cohort, females (35.1%) transferred at a higher rate than the males (33.9%). Persistence rates have increased as well, but the 1996-2000 cohort only persisted minimally more than the 1990-94 cohort.

Table 4.8
Comparison of Transfer by Gender

Statewide Totals First-Time-In-College Freshman Comparison of Rate of Transfer and Persistence of Academic Students									
Gender	96-00 Trans to Sr. Inst.	90-94 Trans to Sr. Inst.	Diff	96-00 Trans. Rate %	90-94 Trans Rate %	Diff	96-00 % Persist	90-94 % Persist	Diff
Female	5,053	2,968	2,085	35.1	30.5	4.6	87.7	85.8	1.9
Male	3,959	2,751	1,208	33.9	33.3	0.6	86.8	85.8	1
TOTAL	9,012	5,719	3,293	34.6	31.8	2.8	87.3	85.5	1.8

Source: Texas Higher Education Coordination Board (1995,2000)

By breaking down the transfer and persistence rates according to ethnicity in Table 4.9, several interesting factors emerge. First, Asian Americans from both cohorts had higher transfer rates than did the other ethnicities. However, the 1996-2000 cohort of Asian American, as well as International students, had a lower transfer rate than did the 1990-1994 cohort. In all other ethnicities, the transfer rate for the 1996-2000 cohort was more than the 1990-1994 cohort. Asian American persistence rates dropped as well from the 1990-1994 cohort to the 1996-2000 cohort. However, International students had the greatest increase in persistence from 79.2% in the 1990-1994 cohort to 90.6 in the 1996-2000 cohort.

Table 4.9
Comparison of Transfer by Ethnicity

Statewide Totals First-Time-In-College Freshman									
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Comparison of Rate of Transfer and Persistence of Academic Students									
Ethnicity	96-00	90-94	Diff	96-00	90-94	Diff	96-00	90-94	Diff
	Trans to Sr. Inst	Trans to Sr. Inst		Trans. Rate %	Trans Rate %		% Persis t	% Persis t	
White	6,395	4,175	2,220	40.1	36.2	3.9	88.4	87.0	1.4
African-American	495	369	126	22.3	21.2	1.1	88.5	83.5	5
Hispanic	1,646	898	748	24.6	22.0	2.6	82.1	80.5	1.6
Asian	376	193	183	43.8	46.0	-2.2	89.6	90.7	-1.1
American Native	36	12	24	28.3	18.5	9.8	86.1	83.3	2.8
American International	64	72	-8	30.8	44.2	-13.4	90.6	79.2	11.4
TOTAL	9,012	5,719	3,293	34.6	31.8	2.8	87.3	85.8	1.5

Source: Texas Higher Education Coordination Board (1995, 2000)

While transfer rates have consistently increased from the 1990-1994 cohort to the 1996-2000 cohort, transfer rates by age group have not been consistent. In fact, four of the nine categories (<17, 20-24, 30-39, and 50-59) experienced a decrease between the cohorts. However, all age groups, except 50-59 and 25-29, had more transfer students in the 1996-2000 cohort than in the 1990-1994 cohort. In fact, the traditional aged student group, 17-19, had an increase of 2,745 students, a 56.5% increase from the 1990-1994 cohort to the 1996-200 cohort. In both cohorts, the < 17 age group transferred at the greatest rate (62.7 in 96-00 and 64.2 in 90-94) with the 17-19 age group transferring at the next highest rate (38.8 in 96-00 and 38.6 in 90-94). Persistence rates followed the pattern seen in the previous breakdowns with the 1996-2000 cohort having a higher persistence rate than the 1990-1994 cohort in all groups except the 40-49 age group.

Table 4.10
Comparison of Transfer by Age Group

Statewide Totals
First-Time-In-College Freshman

Comparison of Rate of Transfer and Persistence of Academic Students									
Age Group	96-00 Trans to Sr. Inst.	90-94 Trans to Sr. Inst.	Diff	96-00 Trans. Rate %	90-94 Trans Rate %	Differ ence	96-00 % Persist	90-94 % Persist	Differ ence
<17	507	43	464	62.7	64.2	-1.5	91.1	83.7	7.4
17-19	7,600	4,855	2,745	38.8	38.6	0.2	87.7	86.7	1
20-24	601	456	145	18.6	19.5	-0.9	83.5	80.7	2.8
25-29	151	152	-1	15.0	14.9	0.1	79.5	78.9	0.6
30-39	103	163	60	10.6	11.9	-1.3	83.5	83.4	0.1
40-49	46	45	1	12.3	9.1	3.2	71.7	77.8	-6.1
50-59	2	4	-2	2.7	4.0	-1.3	100.0	75.0	25.0
60-69	1	1	0	7.7	3.2	4.5	100.0	100.0	0
70 & up	1	0	1	10.0	0.0	10.0	0.0	0.0	0
TOTAL	9,012	5,719	3,293	34.6	31.8	2.8	87.3	85.8	1.5

Source: Texas Higher Education Coordination Board (1995, 2000)

One of the key reasons for addressing articulation and transfer issues was to increase student transfer rates and reduce the number of credit hours lost in transfer. While there is no report that currently provides the number of credit hours lost in transfer, there is evidence that tends to support the idea that the outcomes of the transfer policies have accomplished the purpose of increasing student transfer. Between the cohorts presented in this dissertation, 3,293 more students from the 1996-2000 cohorts with an academic major transferred than did from the 1990-1994 cohort. This represents an increase of 57.6% from one cohort to the next. In addition, 33.1% more students with technical majors transferred from the 1996-2000 cohort (1416 students) than did from the 1990-1994 (1064 students) cohort. Unfortunately, the total number of transfer students cannot be adequately compared because one of the categories for collecting data is different in the 1996-2000 cohort. Furthermore, not only has the number of students increased but the percent of students transferring increased between the cohorts.

Other Outcomes

While conducting analysis of articulation and transfer legislation and policies, additional outcomes were identified that will help determine the effectiveness of articulation and transfer policies in Texas. Some of these outcomes are based on the enacted legislation. One question that must be asked to determine the outcomes of articulation and transfer legislation is did the Coordinating Board establish policies to implement articulation and transfer legislation? Section 61.822, Texas Education Code (2000), charges the Coordinating Board with creating a policy to provide a fully transferable core curriculum block of at least 42 semester credit hours and fully transferable courses from within the core if the block is not transferred. Accordingly, the Coordinating Board established Rule 5.402 of the Texas Administrative Code (2000) to fulfill the legislative requirement. Additionally, Section 61.823 creates a field of study curriculum and charges the Coordinating Board to develop a fully transferable block and fully transferable courses from within the field of study if the block is not transferred. To fulfill this duty required by the Legislature, the Coordinating Board established Rule 5.405 of the Texas Administrative Code.

Besides determining whether the Coordinating Board developed policies to implement the enacted legislation, an additional outcome would be to determine if in fact the Coordinating Board established the advisory committees to create the approved core curriculum and field of study curriculum as required in the legislation (Texas Administrative Code, 2000). The Coordinating Board established an Academic Course Guide Manual Review Committee to meet at least twice annually as needed to

recommend to the Coordinating Board appropriate courses to be included, revised, or deleted from the Academic Course Guide Manual (ACGM). The Lower-Division Academic Course Guide Manual (ACGM) is the official list of approved courses for general academic transfer courses that may be offered for state funding by public community and technical colleges in Texas. Not only are the core curriculum courses delineated in the Lower-Division ACGM, but field of study curriculum courses are listed as well. Currently, a field of study curriculum has been established for Child Development/Early Childhood Education, Grade 4-8 Certification, Business, and Music. Clearly the list of core and field of study curriculum courses in the ACGM demonstrates that the advisory committees have been established and have met to recommend curriculum for the core and field of study curriculums.

In addition to examining whether the Coordinating Board established core and field of study curriculum blocks and advisory committees, a further way to determine if the legislature and coordinating board policies are effective would be to examine how many students transfer core curriculum blocks and field of study blocks. Prior to the 2000-2001 academic year, the Coordinating Board collected no information concerning core and field of study curriculum completers. With reports due at the end of the fall 2001 semester, the Coordinating Board required for the first time that institutions report the number of students who completed the core or field of study curriculum. The report was unavailable at the time of this dissertation. The new report, however, will not indicate if those core and field of study curriculum completers transferred (Texas Administrative Code, 2000).

The next outcome results directly from Rule 5.392 of the Texas Administrative Code (2000). In Rule 5.392, institutions that require a student to retake a course substantially equivalent to a course already taken at another institution can have their formula funding for credit hours in the repeated course deducted from the institutions appropriations. To determine if any reduction of formula funding had taken place, a search of the Texas Higher Education Coordinating Board website and a review of the reports presented to the Texas Legislature during the 77th Regular Session in 2001 was conducted. However, no information was found. To further investigate if any institution's funding was reduced, Dr. J. Leidig (personal communication, January 4, 2002), Director of Instructional Programs in the Division of Community and Technical Colleges was contacted. Dr. Leidig has been with the Coordinating Board since 1995 and stated that no school, to her knowledge, has ever had funding deducted from the institutions appropriations nor has the Board received any formal complaints about institutions requiring students to repeat courses.

Another outcome that needs to be examined is found in Rule 5.393 of the Texas Administrative Code (2000). Rule 5.393 states that the Coordinating Board is require to collect data on the types of transfer disputes reported and the disposition of each case considered by the Commissioner or designee. A search of the Texas Higher Education Coordinating Board website and a review of the reports presented to the Texas Legislature during the 77th Regular Session in 2001 was conducted and no information was found. Consequently, Dr. Leidig (personal communication, January 4, 2002) of the Coordinating Board was asked if any disputes had been submitted to the Commissioner

or designee. Dr. Leidig stated that since she started in 1995, no disputes had been reported and therefore no data had been collected. She further stated that the colleges and universities work very hard to make sure the students receive credit for as many of the transfer courses as possible.

In Rule 5.404 of the Texas Administrative Code (2000), all institutions of higher education are instructed to evaluate their core curriculum every five years and report the results of the evaluation to the Coordinating Board. However, no report is currently available because under the new legislation the first reports are not due until 2004.

The final outcome identified during the analysis of articulation and transfer policy deals with the approval of a core curriculum of more than 48 hours. In Rule 5.403 of the Texas Administrative Code (2000), each institution is allowed to set a core curriculum of up to 48 semester credit hours. If an institution wishes to have a core curriculum in excess of the 48-hour maximum, the institution must receive approval from the Coordinating Board. According to Dr. Leidig (personal communication, January 4, 2002), only one institution in Texas has requested a core in excess of 48. She did not know if the request was approved or denied and did not know which institution had made the request.

Summary

The purpose of this study was to conduct a policy analysis of legislative policy actions and Coordinating Board mandates related to higher education articulation and

transfer in the state of Texas. By using policy analysis techniques, this dissertation investigated the reasons for the policies, the policy actions taken, and the resulting policy outcomes of the actions taken by the Texas Legislature and the Texas Higher Education Coordinating Board. Reasons for the actions identified by this dissertation reveal the same trends found in the transfer and articulation literature presented in previous chapters of this dissertation. These reasons include easing transfer difficulties, increasing the number of hours transferred, increasing student mobility, increasing postsecondary enrollment, and the increasing number of students beginning their higher education at two-year institutions.

To address the reasons for an increased interest in transfer and articulation most of the policies focused on the transfer of credit between institutions of higher learning. New legislation was adopted to standardize transfer and provide information to students to facilitate the transfer function. Subsequently, Senate Bill 148 (1997) was adopted in 1997 with the Coordinating Board developing rules with specific standards for credit transfer. Two key components were developed to ease the transfer burden for students: core curriculum and field of study curriculum.

The first component established a core curriculum of at least 42 semester hours. If successfully completed, this core transfers as a block to the receiving institution in lieu of its core curriculum. If the core is not completed, the student may still transfer all courses taken from the sending institutions core curriculum and be given full credit toward the receiving institution's core curriculum (Texas Administrative Code, 2000).

The second key component, field of study curriculum, applies to the transfer of courses within a specific major (Texas Administrative Code, 2000). With core curriculum being considered the basic courses of a post-secondary degree, field of study curriculum allows the student to freely transfer courses within a particular major between higher education institutions. Courses taken toward a major have historically been the hardest to transfer. The field of study curriculum consists of lower-division courses in a specific field of study, such as math, English, accounting, etc., that would transfer as a block. The transferring student receives academic credit toward the requirements for a baccalaureate degree in a specific major. If successfully completed, credit earned in the field of study curriculum will transfer as a block and replace the field of study curriculum at the receiving institution. However, if the block is not completed, the student will still receive credit for any courses completed from the sending institutions field of study curriculum in lieu of the receiving institutions field of study curriculum. The student is then required to complete the remaining requirements at the receiving institution.

Articulation in Texas is another way to increase credit transfer from one institution to another. However, articulation takes place between specific institutions and does not affect all schools in the state the same way. Thus, little information is available from the Legislature or the Coordinating Board addressing statewide articulation.

The final step of a policy analysis determines if the outcomes are measurable and the actual outcomes. The 1994 study by the Transfer Success Work Group established transfer and persistence rates for students in Texas (Timmer, 1995). A cohort of students who had attempted at least 15 hours of college work and who had attended their initial

community college for at least two semesters and then transferred to a senior institution were tracked over a five year period, from 1990-1994, and statistical information was gathered to determine a transfer rate and a persistence rate. Using the same criteria, a subsequent study was conducted on the latest cohort of students from 1996-2000. With a few exceptions, transfer and persistence rates have increased over the years with more students transferring. According to the data collected, the students who transfer stay at the senior institution for two or more semesters.

The reasons for the policies, the policy actions taken and the resulting policy outcomes examined in this paper demonstrate the important role transfer and articulation play in Texas higher education. These issues will likely remain a state priority in the future. In fact, House Speaker James E. "Pete" Laney charged the Texas House of Representatives Higher Education Committee to conduct an interim study of course credit transfer between higher education institutions. The Speaker issued charges for issues likely to be considered by the Texas Legislature when it convenes in 2003 (Interim News, 2001). Thus, the state's policy concerning articulation and transfer is still evolving.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

FOR FURTHER RESEARCH AND ACTION

For many students, the path to success in post-secondary education is through the community college. In fact, as statistics presented in Chapter I of this dissertation demonstrate, over half of the students participate in higher education in the United States today by enrolling in a community college. Unfortunately, transferring from a two-year to a four-year institution can be a difficult and trying experience. Credits, time, and money are frequently lost in states that fail to have comprehensive articulation and transfer policies in place. While an increasing number of states are examining transfer and articulation policies, most states lack policies mandated by the state legislature to ensure courses transfer efficiently. Clearly, transfer is as important to higher education in Texas as it is to other states. To determine whether Texas has addressed the transfer and articulation needs of its students, an in depth examination into the policy actions of the Texas Legislature and the Texas Higher Education Coordinating Board was needed.

Therefore, the purpose of this study was to conduct an analysis of legislative policy actions and Coordinating Board mandates related to higher education articulation and transfer in the state of Texas. Using policy analysis techniques to examine articulation and transfer policy, this dissertation investigated the reasons for the policies, the policy actions taken, and the resulting policy outcomes of the Texas Legislature and the Texas Higher Education Coordinating Board. Through the use of case study

methodology, three basic research questions guided the investigation of articulation and transfer in Texas.

Summary of the Study

This investigation incorporated a case study approach allowing the researcher to link events over time to reveal organizational processes and to provide the opportunity for process evaluation. As a research method, the case study contributes to the knowledge of individual, organizational, social, and political phenomena. Texas was chosen as the basis for the case study research because of its statewide Coordinating Board, the variety of educational institutions, the population, and the vast geographical size of the state.

In conducting the case study for this research, content analysis was the primary method of gathering data. This method allowed information to be examined in an objective, systematic manner (Gall, Borg, & Gall, 1996). Gall et al. (1996) defined five steps as the major components of content analysis:

1. identification of documents relevant to the research;
2. specification of research questions to be addressed by the analysis;
3. selection of the sample to analyze;
4. development of a category-coding procedure;
5. analysis and interpretation.

These five steps formed the basis of the analysis into the policies related to articulation and transfer in the state of Texas.

Data for this research was gathered from legislative reports, statutory law, education committee hearing transcripts, and policy statements and reports from the

Texas Higher Education Coordinating Board. With research questions as the driving force behind any investigation, this study asked the following three questions:

1. What policy actions concerning articulation and credit transfer have been developed in Texas?
2. What factors led the state of Texas to adopt articulation and transfer policies?
3. After policy actions were initiated, what were the resulting outcomes?

These research questions provided a means to properly analyze articulation and transfer in Texas.

Policy analysis reviews the reasons for the policies, the policy actions taken, and the resulting policy outcomes. By conducting a policy analysis of articulation and transfer policy in Texas, the results of this dissertation identified the state activities that addressed the articulation and transfer needs of the higher education students.

An analyst conducts policy analysis in three steps. The policy analyst begins by conducting a mini-analysis to examine the reasons behind any policy actions taken. In determining the reason for a policy, the analyst creates a set of objectives to guide the content of the analysis of an identified problem. As new information is discovered, the analyst modifies these objectives to accommodate the new findings. In addition, the analyst develops a comprehensive understanding of the environment and culture affected by the policy, and then establishes assumptions to guide the analysis. Second, the researcher unravels the policy analysis knot by uncovering the policy actions implemented to correct the problem discovered during stage one of the process. During

this stage, the analyst examines the policies developed to address the reasons driving the policy. In the third stage, the analyst examines the outcomes of policy actions to determine if the implementation activities were followed and the degree to which the intended outcome was achieved. Examining the outcomes of the policy action can help the analyst determine if the policy accomplished its intended purpose or if new policies should be developed. Thus, by drawing conclusions based on the information collected while conducting this research, this dissertation utilized policy analysis to determine the effectiveness of articulation and transfer policy (Gall, Borg, & Gall, 1996).

Reasons

Policy analysis begins by examining the reasons for developing a particular policy. National studies have demonstrated a variety of reasons for creating articulation and transfer policy. The findings of these studies were broken down into five categories: student issues, articulation and transfer of courses in curricula, resource constraints, time to degree, and other. Many of the same issues cited in national studies as the need for articulation and transfer policy were also identified in Texas. Testimony in Curricula of Certain Institutions (1997) identified the following results:

Student Issues

- Society is becoming increasingly mobile and students are moving throughout Texas.
- Community College students face difficulty efficiently moving through the system, matriculating, and obtaining a degree.

- Many students who transfer lose credit for courses taken at the sending institution.
- The number of transfer students has grown.

Articulation and transfer of courses

- Many students incurred difficulties in transferring the maximum hours of credit from one institution to another.
- Developing a core curriculum was a good first step, but it did not fix the problem of transfer in Texas.
- It is time for the Texas Legislature to take the next logical step; by ensuring each Texas public institution has a core curriculum that is recognized and transferable to other Texas higher education institutions.
- Transferring core and field of study courses as a block will prevent a student from having to retake courses.

Resource constraints

- New transfer policies will potentially save the state a considerable amount of money, approximately 20 million dollars projected savings for duplicated courses.
- Duplicated courses force students and parents to pay additional tuition and fees as well.

Time to degree

- Extra courses lengthen the time to degree.

Other

- Previous legislation did not fix the transfer and articulation problems.

These categorized reasons demonstrate the need for a change in the way articulation and transfer operate in Texas. In the normal course of policy making, the subsequent policies should be designed to address the reasons presented at the time the policy is enacted. Consequently, the next logical step in conducting a policy analysis is the examination of the policies created to address articulation and transfer in Texas.

Articulation and Transfer Policies

The rules that govern higher education in Texas are found in the Texas Education Code (2000) and the Texas Administrative Code (2000). Policies for articulation and transfer were examined to determine what policies had been established. Unfortunately, the Texas Education Code and the Texas Administrative Code contain only limited provisions to govern articulation efforts in Texas. Consequently, only minimal state guidance is currently available for the development of articulation agreements between state institutions. Individual institutions must work out the details of articulation among themselves. This dissertation examines statewide policies, but does not address the interactions between individual schools.

Rules and regulations guiding statewide articulation were enacted to enable public community/junior colleges and technical colleges to enter into contractual agreements with other institutions of higher education or non-SACS/COC-accredited organizations to

improve the articulation, quality, and efficiency of educational programs and services.

Specific provisions of these articulation policies include the following:

- An appropriation provided to the Texas Higher Education Coordinating Board to reward post secondary schools for achieving goals set by the Board.
- Tech-prep consortiums that seek grant funding must implement the tech program under an articulation agreement between the participants in the consortium.
- Institutions of higher education may enter into articulation agreements with other institutions of higher education, labor organizations, or businesses.
- University systems are required to develop articulation agreements and partnerships with local community colleges, technical colleges, and other universities.
- Workforce education courses that report contact hours, which result in either credit hours or continuing education units, are eligible for formula funding.
- Workforce education courses that meet or exceed 780 hours in length must be awarded appropriate credit hours and be applicable to a certificate and an applied associate degree program.

- Student enrollments for semester/quarter hour credit are subject to the provisions of the Texas Academic Skills Program, as applicable. (Texas Administrative Code, 2000)

While individual articulation agreements between institutions provide detail concerning the transfer of credit, these policies simply guide articulation development and do not spell out statewide transfer initiatives.

As stated earlier, national studies delineate a variety of policies developed to address articulation and transfer needs. The findings of these studies were broken down into five categories: Curriculum Related Policy; Transfer and Application of Credit Policy; Established Committees to guide policy development; Accountability Policy; Access Policy; Goals & Objectives; and Other. Appropriately, many of the same policies cited in national studies concerning transfer are applicable in Texas. As a result, the policies were divided as follows:

Curriculum Related Policy

- Core curriculum is fully transferable.
- Field of study curriculum is fully transferable.
- Core curriculum courses must be consistent with the common course-numbering system of Texas.
- Field of study curriculum satisfies the lower-level, major-specific curriculum.
- Field of study curriculum fulfill the lower-level, major-specific requirements for a baccalaureate degree

Transfer and Application of Credit Policy

- Core curriculum block must consist of at least 42 semester credit hours.
- Core curriculum is transferred and accepted as a block and will replace the core curriculum at the receiving institution. The student is not required to take further core curriculum courses at the receiving institution.
- If the block is not completed, successfully completed courses from the core curriculum are fully transferable to a public higher education institution and accepted in place of the receiving institutions core curriculum. The student must complete remainder of the receiving institutions core curriculum.
- Successfully completed field of study curriculum block is fully transferable to any public higher education institution and is accepted in place of the receiving institutions field of study curriculum.
- If the block is not completed, successfully completed courses from the field of study curriculum are fully transferable to a public higher education institution and accepted in place of the receiving institutions field of study curriculum courses. The student must complete remainder of the receiving institutions field of study curriculum.
- Institutions do not have to accept a grade of "D" as transfer.
- The total number of hours receiving institutions must accept from a community college is 66, but schools are allowed to accept more.

Established Committees to guide policy development

- Advisory committees were created to develop requirements for courses included in the core curriculum and field of study curriculum.

Accountability Policy

- Institutions must receive approval from the Texas Higher Education Coordinating Board to have a core curriculum greater than 48 hours.
- No institution is required to accept more credit than is outlined in the applicable Coordinating Board approved transfer curriculum for that major.

Access Policy

- Access to student services must be equivalent for transfer students and non-transfer students.

Goals & Objectives

Other

- Transfer disputes are appealed to and decided by the Commissioner or designee.
- If the receiving institution requires a student to repeat a substantially similar course, funding can be denied for the duplicated course.

By linking the reasons behind the policies to the policies as created, policy analysis can determine if the policies were designed to address the identified needs for the articulation and transfer policy. First, articulation efforts seem to be directed toward the institutional level instead of the state level. The Legislature and the Coordinating

Board have developed minimal policies to guide the articulation efforts of individual institutions but have not provided a statewide articulation plan. Articulation agreements are written between institutions and, thus, address the specific needs of those schools.

Transfer policies, on the other hand, have been the method utilized in Texas for statewide policies to facilitate effective movement of students from institution to institution. Key areas identified as reasons for transfer reform focused on five areas: student issues, articulation and transfer of courses, resource constraints, time to degree, and other. The policies, then, were designed to affect change and address the needs identified. Consequently, linking the reasons with the policies provides insight into whether the policies were effective.

The first category of reasons for the articulation and transfer policy is student issues and includes the difficulty students face transferring credit from one institution to another, students losing credit for classes already taken, and the increasing number of transfer students in the future. Legislative and Coordinating Board policies were created to address these student issues. The implemented policies provide students with a fully transferable core curriculum block of at least 42 hours, a fully transferable field of study curriculum block, the transfer of individual courses within the sending institutions core curriculum and field of study curriculum even if the student does not complete the full core or field of study, equivalent access to student services, and an avenue to settle transfer disputes.

In addition to the student issues addressed by state policy, reasons were detailed concerning articulation and transfer of courses. The inability of students to transfer the

maximum number of credit hours and the need for additional, more detailed legislation were key reasons to update articulation and transfer policy in Texas. With the creation of a 42-hour core curriculum, a field of study curriculum that standardizes the lower-division major specific curriculum, and the ability to transfer any course from the sending institutions core and field of study curriculum, students should be able to transfer a maximum number of credit hours. This increased transferability demonstrates that the new rules ease the transfer difficulties student's experience.

Not only did student and transfer issues instigate change, but also resource constraints indicated a need for change in transfer policy. Consequently, higher education policies mandate that institutions must provide students with information concerning the transferability of courses. By providing transfer information to students, the duplication of courses is reduced thereby eliminating the additional cost of retaking classes and decreasing the cost to students, parents, and taxpayers.

Finally, eliminating duplicated courses not only reduces cost, but also reduces the time to degree. The current legislation edges closer to correcting the transfer and articulation reasons identified and subsequently addressed in articulation and transfer policy changes.

Outcomes

Besides identifying the reasons for articulation and transfer and the resulting policy, the final step in a policy analysis examines the policy outcomes to determine if the policies were effective in addressing the reasons behind the policy changes. Because

statewide articulation is not present in Texas, the final summary simply addresses the statewide transfer policies currently in effect. One of the main purposes of addressing transfer issues was to increase student transfer rates and reduce the number of credit hours lost in transfer. To establish transfer rates, the Coordinating Board tracked students in cohorts to determine transfer patterns and persistence tendencies and to see if transfer has increased. It appears that the transfer policies have accomplished the intended purpose. Between the two cohorts presented in this dissertation, 3,293 more students with an academic major transferred in the 1996-2000 (9,012) cohort than did in the 1990-1994 (5,719) cohort. These numbers represent an increase of 57.6% from one cohort to the next. In addition, 352 more students with technical majors transferred in the 1996-2000 cohort (1416 students) than in the 1990-1994 (1064 students) cohort representing an increase of 33.1%. Unfortunately, the total number of transfer students cannot be adequately compared because one of the categories for collecting data is different in the 1996-2000 cohort. However, the percent of students transferring can be determined and has increased between the cohorts. Of students with an academic major in the 1996-2000 cohort, 34.6% transferred as compared to 31.8% from the 1990-1994 cohort. Thus, the percentage reflects an increase of 2.8 percentage points. In addition, the percentage of students with a technical major increased to 13.5% for the 1996-2000 cohort as compared to 11.3% in the 1990-1994 cohort, an increase of 2.2 percentage points.

Other outcomes identified through the policy analysis reveal a transfer process that is still being developed. For instance, the Coordinating Board has established a fully transferable core curriculum of at least 42 semester credit hours, a fully transferable field

of study curriculum, and established advisory committees to create the approved core and field of study curriculum. However the Coordinating Board has only approved five field of study curriculums and only started collecting data on core and field of study curriculum completers for the 2000-2001 academic year. Because the reporting process is still in its infancy, no institutions have yet reported any transfer conflicts to the Coordinating Board and no institutional funding has been reduced for requiring a student to retake a course substantially equivalent to a course already taken at another institution.

Recommendations for Further Research

The current articulation and transfer policy in Texas is only four years old and the Coordinating Board is in the process of implementing all the components of the process. As with any new program, implementation is often realized over several years. Therefore, future researchers should have a golden opportunity to track the progress and analyze the outcomes of the articulation and transfer policy initiatives. Several future studies are suggested from the research presented in this dissertation. For instance, a study could be conducted to focus on the key reasons behind the increase in the number of students transferring. Current transfer policy has eased the challenges students face in transferring credit between institutions. However, this study only conducted a policy analysis and did not attempt to factor in all the variables that could lead to the increase in transfer students and transfer rates. Variables such as the increase in students attending higher education, the increase in students beginning their post secondary education at two-year institutions, and a change in the employment market might contribute to the

increase in the number of students transferring. A comprehensive study could shed light on these factors and help guide future policy decisions.

Another future study could examine the point at which students transfer. By determining if students wait to finish the associates degree before transferring, finishing the core or field of study curriculum before transferring, or transfer at the earliest opportunity, policy makers can enact policies that guide the future of higher education while meeting the needs of the transfer students.

Besides addressing the increasing number of transfer students and the point in time a student transfers, further studies could focus on the transfer needs of Hispanic students. With the Hispanic population projected to be the majority in the state of Texas by 2030 and with Hispanic students currently representing 27.8% of two-year institution's enrollments, Hispanic students will constitute a large portion of the future transfer students. By studying the transfer behavior of Hispanic students now, policy makers can identify problematic trends and make changes to reduce these problems in the future.

While this study focused on the transfer policies from the perspective of the state, future studies could examine how specific segments of higher education adapt the Coordinating Board policies. For instance, current transfer policy focuses on the core and field of study curriculum as a vital transfer tool. Further studies could examine which courses in the core curriculum are common between institutions. In other words, which courses in the core curriculum are a portion of multiple institutions' core

curriculum. With the Texas Common Course Numbering System in place, identification of common courses would be relatively easy.

Another issue not investigated in this study is the impact of the new transfer policies on private higher education. This study reported on the reasons, policy actions and policy outcomes associated with articulation and transfer of students in public higher education. An important topic that parallels this study could focus on the articulation and transfer activities in private higher education. Topics could include the impact of state transfer policies on private higher education, how the policies are used in private higher education, and the transfer patterns of students in private higher education.

Finally, one factor that is vital when studying higher education issues is the perception of the faculty. Dr. Robert Goad testified in the Texas House Higher Education Committee hearings about concerns over elimination of curricular innovation at the institutional level. Consequently, further studies could examine the faculty perspective as related to articulation and transfer, providing insight in how faculties perceive transfer issues and the differing points of view of faculty at two-year institutions as compared to faculty at four-year institutions.

Recommendations Regarding the Policy Action and Outcomes

The state of Texas has worked hard to improve articulation and transfer in the state. With the development of new laws and policy, efforts have been made to standardize the statewide transfer practices. However, while the new laws and policies

have only been in place since 1997, additional efforts need to be made to disseminate the outcomes associated with articulation and transfer.

First, more information should be available on the Internet. The World Wide Web, also known as the Internet, has revolutionized many aspects of the way our society functions. For example, much of the research for this dissertation was conducted using the Internet by searching the sites of multiple state agencies and higher education institutions. Many government agencies now post all public information on the Internet allowing easy access to important facts. Consequently, when people begin to search for information, the Internet is the first place many start. The Texas Higher Education Coordinating Board, too, uses the Internet as a central point for the information they have available. However, the Coordinating Board does not provide an online data information system that allows students and advisors to determine the transferability of courses to all other participating institutions. Many states such as Maryland, Utah, New Mexico, Illinois, Colorado, Rhode Island, and Wisconsin to name a few, have online course transfer systems (California Postsecondary Education Commission, 2002; Colorado Commission on Higher Education; EDUCAUSE, 2002; iTransfer, 2002; Maryland College and Universities, 2002; Maryland Higher Education Commission, 1997; New Mexico Commission on Higher Education, 2002; Oklahoma Higher Education, 2002; Rhode Island Board of Governors for Higher Education, 2002; Transfer Information System, 2002; Utah System of Higher Education, 2002). This type of system, much like the ARTSYS system in Maryland (Maryland College and Universities, 2002), would allow the transfer student to plan for their courses ahead of time and “virtually” eliminate

transfer problems. Transfer guides are available but a central location is needed that students and advisors can go to electronically compare the student's transcript with the degree programs at the institution the student wishes to attend in the future.

An interesting conclusion can be drawn from information found during review of the reasons for and the outcomes of articulation and transfer policy. While a need for removing transfer obstacles was cited, statistical information and testimony seemed to discount the argument that students were actually having trouble with transfer (Curricula of Certain Institutions, 1997). First, in testimony before the Senate Education Committee, Dr. Ray Garcia stated, citing a national study by the American Council on Education, on average only 3 semester credit hours are lost by students when transferring from a two-year institution to a four-year institution. Dr. William Cunningham, Chancellor of the University of Texas System, also provided testimony that few transfer credit hours are lost at the University of Texas and that with students transferring up to 60 hours a loss of only three semester credit hours is about as low a transfer loss as is possible. With no institutions reporting transfer disputes to the Coordinating Board and few credit hours being lost in transfer, one must question why Texas and other states are working so diligently on easing transfer. However, if more disputes arise than are reported, additional policies should address the reporting process for disputes and provide students with an easier relief process. Despite the success of the current transfer policy in Texas; the state's current policies should continue to be analyzed so that the state achieves the desired outcomes.

Another interesting issue was identified in the committee hearings. Testimony presented by Dr. Dan Angel, president of Stephen F. Austin State University, cited a projected savings for the state of about 20 million dollars if the state implemented Senate Bill 148 (1997) (Curricula in Certain Institutions, 1997). However, while conducting the research for this dissertation, no information was found that reported actual savings that resulted from the implementation of Senate Bill 148. Since a savings to the state was cited as one of the reasons for the change in articulation and transfer policy, the Coordinating Board should report the amount of money saved as a result of the new transfer policies. Consequently, questions must be asked concerning how the savings will be calculated, when the savings will be calculated, and how the results will be disseminated? In addition, the Texas Legislature needs to determine what will happen with the projected savings and how an individual institutions funding will be effected.

Finally, some issues have not been addressed in the current articulation and transfer policies. While Texas has policies in place to transfer core and field of study curriculum, no provision has been made for students that complete an associate of arts degree before transferring to a senior institution. With only five approved field of study curriculums in place, students transferring lower-level major specific course work have little guarantee that the transferred courses will be applied to the receiving institutions major. In fact, the remainder of the courses in an Associate of Arts degree, above the core curriculum, could be applied only to elective courses. With 42 hours of core curriculum out of a total of 66 hours that have to be accepted at the receiving institution, placement of up to 24 hours of credit from the Associates Degree are still controlled by

the four-year institution. If the receiving institution does not apply the remainder of the transferred course credit to the major, students can still be required to take duplicate or additional courses beyond those non-transfer students are required to take at the four-year institution.

Another shortfall of the current articulation and transfer policy is the fact that up to half of students starting at a two-year institution do not finish college. A cohort of first-time-in-college freshman starting their postsecondary education at a two-year institution was tracked from 1996 to 2000 to evaluate the students transfer activities (Table 4.3). Unfortunately, only 50% of the students in the cohort were still enrolled in any public postsecondary institution during the 2000 academic year. A large percentage of students fail to persist to the point needed to transfer to a senior institution. In addition, many students start at community colleges but transfer to the four-year institution quickly. Of the students who entered college in 1993 with no prior college experience, only 50.7% completed 12 or more credits at the community college (Texas Higher Education Coordinating Board, 2000, p. 7). With almost half of transfer students completing less than 12 hours before they transfer to a four-year institution, why is there a need for a transfer block of 42 hours? In fact, if the number of transfer students from the 1996-2000 cohort of first-time-in-college freshman (11,052) was compared to the total number of students that started in the cohort (90,103), only 12.3% of the students transferred. Perhaps higher education policy makers need to focus more on the attrition problems than the articulation and transfer issues.

Conclusion

Articulation and transfer policies have become important across the United States as each state focuses on these issues in a way suitable to their individual needs. Texas is no exception. In fact, to address articulation and transfer among the state's higher education institutions, the state, through the Texas Higher Education Coordinating Board, has approved a core and a field of study curriculum that are fully transferable either as an entire block or as individual courses.

After a review of current literature on articulation and transfer, California and Florida were identified in Chapter II of this dissertation as leaders in the articulation and transfer policy arena. Texas parallels these states in several ways. Texas is faced with a changing demographic composition of its population much like California and Florida. With the Hispanic population projected to be the majority by 2030, increased higher education costs, and an increase in student demand, Texas is facing issues that California and Florida both faced in the 1980s and 1990s. In California, education leaders were charged by the Legislature to maintain a student transfer system that includes adequate transfer to four-year institutions and has transfer agreements for lower division major prerequisite courses (Moore, 1997). Educational leaders in Texas have been charged with a similar task. The Coordinating Board was directed by the Legislature to create a student transfer system that allows the free transfer of credit to other institutions in the state. In fact, the lower-division transfer policies listed in Moore's study resemble the core curriculum and field of study curriculum transfer components of the Texas policies.

Portions of Florida's solution to articulation and transfer issues were similar to California. Florida's first statewide articulation agreement was developed in 1959 and

guaranteed the transfer of a block of credits between institutions (Florida State Department of Education, 1988). Texas has similar policies in place that provide for the guaranteed transfer of credit as a block through the core curriculum and field of study curriculum (Texas Administrative Code, 2001). In Florida, students are able to transfer a minimum of 36 semester credit hours to other institutions in the state where Texas ensures block transfer of the core curriculum of between 42 and 48 hours of credit as well as block transfer of the field of study curriculum. In addition, if the student does not complete the entire core or field of study curriculum, any courses successfully completed from the core and field of study curriculum are transferable.

However, one component of the transfer policies in Florida is different. In Florida, the higher education system was designed as a "2+2" system with students completing their first two years of studies at the two-year institution and transferring for the final two years of study to the four-year institution. Lemon and Pitter (1996) report that instead of relying heavily on articulation agreements between institutions, Florida has a statewide articulation system. By using the 2+2 system, junior colleges act as feeder schools for the state's universities. In 1971, the associate in arts degree became the transfer degree enabling students completing the associate degree to transfer to a four-year institution with junior standing. In addition, Florida legislation enacted in 1996 required all baccalaureate degree programs to be reduced to 120 credit hours, general education requirements at all state institutions be reduced to 36 hours, and common degree program prerequisites to be standardized, offered, and accepted by all of the twenty-eight community colleges and nine public universities. As a result of the policies

in Florida, common degree program prerequisites were offered and accepted by all of the state's universities and community colleges enabling students to accomplish their educational objectives as quickly as possible. While Texas has policies in place to transfer core and field of study curriculum, no provision has been made for students that complete the associate of arts degree before transferring to a senior institution. With only five approved field of study curriculums in place, students transferring lower-level major specific course work have little guarantee that the transferred courses will be applied to the receiving institutions major. In fact, the remainder of the courses in an Associate of Arts degree, above the core curriculum, could be applied only to elective courses. With 42 hours of core curriculum out of a total of 66 hours that have to be accepted at the receiving institution, placement of up to 24 hours of credit from the Associates Degree are still controlled by the four-year institution. If the receiving institution does not apply the remainder of the transferred course credit to the major, students can still be required to take duplicate or additional courses beyond those non-transfer students are required to take at the four-year institution. Texas policy makers should consider additional solutions to meet these shortfalls.

California and Florida have both experienced a reduction in transfer problems (Moore, 1997; LeMon & Pitter, 1996). While Texas is still in the developmental stages of its articulation and transfer policies, it is not yet totally apparent whether the new policies have effected a true change in articulation and transfer. There is an increase in the number of students transferring and the percentage of first time in college freshman transferring after 15 hours. However, no evidence is available to determine if the

increased transfer numbers and rates are due to the policy changes or simply because more students are starting their education at the two-year institution.

Unfortunately, if the transfer function is not simplified, fewer students will transfer and the education level of the people of the state will be severely limited. This situation has become a trend in California. California has experienced a decline in the number of students transferring from the community colleges to the California State University system (Woolfork, 2000). Woolfork (2000) reported the decline could be associated with the institutional policy decisions limiting the number of lower-division transfers accepted at the baccalaureate systems, the limited availability of courses, and the complexity of the California transfer requirements.

Texas policy makers should consider some of the options California and Florida have chosen. Fortunately, steps have already been taken to better facilitate the process to ensure a fluid articulation and transfer process in the state. With further revision, the Legislature and the Coordinating Board have the opportunity to learn from the experiences of other states like California and Florida and design a state of the art articulation and transfer process that guarantees the highest level of course credit transferability of all courses from one higher education institution to another.

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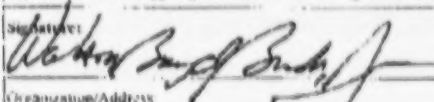
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